

DIARY
1948

B. Biggs.

To be repaid or paid later

A Microscope	55-17-6	
B Thresher	01.1.10-17-6)	
	flaking	14-10
	wires	7-6
	hook	10
	drill	7-3
B Glitchie ffs	2-4	3-7-7
B Needle holder (2) @ 35/-		1-15-0
		1-15-6
		<u>8-9-11</u>

Ours thing.

A Needle holder	35/-
✓ S W forks	12-6
✓ Spikes scissors	8-6
✓ Lovers surgical	2-9-0
✓ Mammeter	8-8-0
✓ Macintosh with	4-10-0
✓ Hat both ffs	1-4-6
✓ Anaceth mask	15-6
✓ Needles	7-6

Antelawl
Refrigerator
Still

B. Biggs.

money spent to date

2 Ambelaves @ 143

286

2 Drums

14

1 Kerani refrigerator =

100

instruments & V.H.

30.12

W.V.

= 118

Other items repaid by A.B.M.

79 16 9

Bowls

60.

Books r.

11

Other ffs.

8 10

£ 707.18 9

B. Briggs

Andy

~~to make a shell - pen~~

~~the things being~~

~~make a list of drugs + find best~~

~~place to buy them + form to~~
~~buy them in~~

~~Anchor~~

~~statement of where to buy them~~

L. Calov

Prices

Acme Bedstead Co.

cream or white.

Stamper.

Aug

Ordinary	5	7	6
center leg	8	2	7
nightingale left	9	7	7

DIARY
1948



Another happy Nestlé baby.

SYD

PREFACE TO THE TWENTY-FOURTH EDITION.

In the last Edition we reprinted a series of extracts prepared originally by our Associated Company, Nestlé's Milk Products Inc., New York, in booklet form for distribution among members of the medical profession in U.S.A.

We feel that extracts of this nature are of special interest to the busy practitioner, and the title and source of the abstracts serve a useful purpose, should further reference be necessary in a medical library.

It is our present intention to continue to publish abstracts in this form each year.

We are pleased to acknowledge all extracts from scientific publications which we have used in compiling the present Edition, and also to thank those members of the Medical Profession who have made available to us helpful information.

It is our earnest endeavour to follow the latest developments in Infant Nutrition and suggestions are therefore always welcome.

NESTLÉ RESEARCH LABORATORY

SYDNEY, 1st DECEMBER, 1947.

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REMARKS TO THE TWENTY-FOURTH EDITION

It is a pleasure to have this book in its twenty-fourth edition. The book has been a success since its first publication in 1880. It has been a standard text for many years and has been revised and enlarged many times. The present edition is the result of many suggestions and criticisms from teachers and students. It is hoped that it will be found useful and interesting.

The book is divided into two parts. The first part contains the theory of the subject and the second part contains the practice. The theory part is divided into chapters on the history of the subject, the principles of the subject, and the methods of the subject. The practice part is divided into chapters on the application of the theory to the practice of the subject.

The book is written in a simple and clear style. It is intended for students who are beginning to study the subject. It is hoped that it will be found useful and interesting. The book is a standard text for many years and has been revised and enlarged many times. The present edition is the result of many suggestions and criticisms from teachers and students.

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WESTERN PUBLISHING ASSOCIATION

Chicago, Ill.
1914

Diary, 1948

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NUTRITION ABSTRACTS

of current scientific papers on nutrition with special emphasis on infant and child
nutrition*

* Compiled by Research Dept., Nestlé's Milk Products Inc., New York.

Vitamins . . . Proteins . . . Minerals . . . Carbohydrates

Present Knowledge of Vitamin A in Nutrition

Nutr. Revs. 4: 67, 1946.

The synthesis of vitamin A has not been definitely established, but vitamin A is known to be an unsaturated cyclic alcohol, occurring as such and as esters of higher fatty acids. It is formed, apparently by all species of fish, birds and mammals, from the carotenes and carotenoids which are synthesized by all plants except parasites and saprophytes. The source of vitamin A for carnivores must be that formed by fish (from carotenoids of marine plankton) and by herbivores (from carotenoids of green vegetation). Two molecules of vitamin A are formed in the liver from one molecule of beta-carotene, one of vitamin A from the other provitamins. Vitamin A is better absorbed from the intestinal tract and less subject to destruction than the carotenoids. Chief physiological function of vitamin A is the maintenance of normal epithelial tissues. In vitamin A deficiency the epithelium of mucous surfaces atrophies and is replaced by keratinized epithelium, exposing the individual to infections of the eye, mouth, respiratory tract and genito-urinary tract. Functional hemeralopia (night blindness) follows failure to replace the vitamin A slowly used up in the breakdown and resynthesis of rhodopsin in the rods of the retina. Another effect of vitamin A deficiency is observed in young mammals: growth of the skeleton is retarded before that of other tissues, and central nervous system structures are damaged by crowding in the skull and spinal canal. The recommended daily allowance of 5,000 I.U. for adults is an estimation for which there is but little direct experimental evidence, but clear clinical signs of A deficiency are rare in the United States. Certain diseases, particularly those accompanied by fever and liver involvement, may result in low levels of plasma vitamin A. Impaired liver function may be indicated by low plasma vitamin A with high plasma carotene.

Effect of Elevated Body Temperature on Plasma Vitamin A and Carotene

H. C. S. Aron, R. M. Craig, C. J. Farmer, H. W. Kendell and G. X. Schwemlein—Proc. Soc. Exper. Biol. and Med. 61: 271, 1946.

The effect of physically-induced fever on plasma vitamin A and carotene is suggested as an indication of the intensity of action of the fever on the body. In 92 patients subjected to temperatures of 105.5° to 106.0°F. (rectal) there were decreases in plasma vitamin A and carotene directly related to the duration of the fever. The decrease in vitamin A was somewhat greater and more rapid than the decrease in carotene level. This effect was not influenced by bismuth subsalicylate in oil, mapharsen, sulfathiazole or penicillin. Plasma vitamin A spontaneously returned to normal by about the second day after the fever. In four patients who developed jaundice, the plasma vitamin A dropped to 50 per cent. or less of the previous level, and the rise to normal was retarded.

A Comparison of the Action of Vitamin D on the Teeth of Rachitic Rats with that of Additional Calcium or Phosphorus Added to Rachitogenic Diets

J. T. Irving—*J. Physiol.* 104: 253, 1946.

Young rats (50 to 60 gm.) were made rachitic by diets abnormally high or low calcium: phosphorus ratios, then were given either vitamin D or diets of more normal calcium: phosphorus ratios. Tooth and bone changes were then studied histologically. The response in tooth structure following the diet changes preceded that in bone structure. Change from an abnormally high dietary calcium: phosphorus ratio to a normal, from an abnormally low ratio to a normal, or the administration of vitamin D to animals on the low ratio diets, all produced apparently identical changes in the teeth. Giving vitamin D to animals on the high ratio diets produced a histologically different type of healing.

The Effect of Advancing Age on Dietary Thiamine Requirements

C. A. Mills, E. Cottingham and E. Taylor—*Arch. Biochem.* 9: 221, 1946.

Studies with mature rats, at temperate and at tropical temperatures, show the dietary thiamine requirement to increase sharply with advancing age. The metabolic need for thiamine appears to depend more upon the mass of metabolizing tissue than upon caloric intake. Therefore, when caloric intake per unit of body weight is reduced, there should be a compensatory increase in dietary thiamine concentration.

Thiamine Depletion of Human Subjects on a Diet Rich in Thiamine

H. T. Ness, E. L. Price and H. T. Parsons—*Science* 103: 198, 1946.

A series of tests was made with five college women to whom live, fresh yeast was fed preceding each meal. The withdrawal of thiamine by the yeast is demonstrated to be such as to result in a "considerable to severe" deficiency of thiamine. This is suggested as a convenient technique for short-term thiamine deficiency studies.

The Effect of Thiamine Deprivation upon Gastric Secretion in Rats

H. Shay, S. A. Komarov, M. Gruenstein and S. S. Fels—*Gastroenterol.* 6: 199, 1946.

In rats severely depleted of thiamine, the volume of spontaneous gastric secretion was greatly increased, while gastric acidity, peptic power and total chloride concentration were unaffected. When thiamine deficiency was still more severe, the peptic power of the gastric juice remained normal but the acidity decreased, and volume increased. The increased gastric secretion probably contributes to the greater incidence of severity of gastric ulcers which is observed in thiamine-deficient animals as compared to pair-fed controls.

The Thiamine, Riboflavin, Nicotinic Acid and Pantothenic Acid Content of Colostrum and Milk of the Cow and Ewe

P. B. Pearson and A. L. Darnell—*J. Nutr.* 31: 51, 1946.

Cows' milk contains 0.38 micrograms per cc. of thiamine and 1.77 micrograms of riboflavin; cows' colostrum (day of parturition) contains 0.62 micrograms per cc. of thiamine, 6.10 micrograms of riboflavin, less pantothenic acid than milk and about the same amount of nicotinic acid. Ewes' milk contains 0.60 micrograms per cc. of thiamine and 4.36 micrograms of riboflavin; ewes' colostrum 1.08 micrograms per cc. of thiamine and 20 micrograms of riboflavin, less pantothenic acid and less nicotinic acid than the milk. The relatively high thiamine, riboflavin and nicotinic acid contents of ewes' milk and colostrum suggest a possible correlation with the much more rapid rate of weight gain in the young of that specie.

The Effect of Riboflavin Deficiency upon Carbohydrate Metabolism in Anoxia

M. E. Wickson and A. F. Morgan—*J. Biol. Chem.* 162: 209, 1946.

Riboflavin is shown to be essential to the increased formation of liver glycogen which is stimulated by low oxygen tension. The normal response to anoxic anoxia occurred if deficient animals received riboflavin injections immediately preceding the exposure. Fasting at sea level resulted in lower blood glucose in riboflavin-deficient rats than in pair fed control animals. Liver riboflavin level varied with riboflavin intake.

The Comparative Value of Niacin and Nicotinamide

W. A. Krehl, C. A. Elvehjem and E. B. Hart—*Nutr. Revs.* 4: 65, 1946.

Nicotinamide, rather than nicotinic acid (renamed niacin) is the form in which the vitamin generally occurs in living tissues. The two have equal biologic activity. Clinical use of nicotinic acid even in doses as low as 30 mg. a day may be accompanied by undesirable reactions, which do not follow nicotinamide administration. Histamine-like reactions, characterized by marked flushing, have been reported in a number of instances. A cereal company is reported to have changed from the use of niacin to nicotinamide because of susceptibility to the former among their operators exposed to the material. Susceptibility is highly variable, even in one individual at different times. The somewhat lower cost of niacin should not justify the use of this less reliable form either clinically or in food products.

Gastric Phase of Milk Digestion in Childhood

I. J. Wolman—*Amer. J. Dis. Child.* 71: 394, 1946.

There are wide variations in the gastric secretion of a normal child at rest—in volume, rate of formation, pH, pepsin and acidity. A glass of milk has buffer capacity sufficient to neutralize even secretions high in free hydrochloric acid. The milk is coagulated in a mean time of about 20 minutes, the pH falls somewhat, and the milk is emptied from the stomach in a mean time of 118.5 min. No differences could be detected in the responses to "soft curd" and "hard curd" milks. Very little proteolysis occurs in the stomach — chemical breakdown occurs beyond the pylorus.

Does Milk Between Meals Hamper the Appetite or Food Intake of the Child?

I. J. Wolman—*J. Pediat.* 28: 703, 1946.

It has been stated that mid-morning milk impairs the appetite for lunch. In this study, 59 children were given a seven ounce glass of milk one hour before lunch and one hour before dinner for nearly five months. No signs of decreased appetite or decreased consumption of food at meals could be found. A part of the group was studied quantitatively for three weeks during which they were given extra milk three times a day, one hour before each meal. Food consumption at meals was not reduced. Thus extra milk is a real addition to the diet and is to be recommended whenever additional food is desirable.

The Use of Potassium Chloride in the Treatment of the Dehydration of Diarrhea in Infants

C. D. Govan and D. C. Darrow—*J. Pediat.* 28: 541, 1946.

Treatment of diarrhea with solutions containing potassium chloride in addition to sodium chloride, sodium lactate and glucose is described. Of fifty infants treated in this way, three died; while of fifty-three infants treated by the old method, seventeen died. The duration and

intensity of the diarrhea do not appear to be lessened. In one case potassium intoxication with complete heart block occurred but responded to treatment, and in five cases there was severe erythema which appeared not to affect the course of recovery.

Dental Caries. Effect of Carbohydrate Supplements on Susceptibility of Infants

J. D. King—*Lancet* 1946 I: 646.

Infants given boiled sweets and chocolate biscuits before going to bed showed no increase in caries over periods of six months to two years. Some previously existing caries were found to be arrested. Older children (10 to 14 years) had exceptionally few caries. The diets were rather high in A and D, satisfactory as to calcium and phosphorus, and high in carbohydrate. The water contained only 0.2 parts per million of fluorine.

Relation of Ascorbic Acid to Effectiveness of Iron Therapy in Children

H. V. Schulze and A. F. Morgan—*Am. J. Dis. Child.* 71: 593, 1946.

There are several indications that there may be some relationship between ascorbic acid and iron metabolism and hemoglobin formation. In this study, 36 children aged 7 to 12 years were observed for ten weeks under identically controlled living conditions. The average hemoglobin value at the beginning of the study was 10.7 gm. per 100 cc. of blood, and there were no signs of scurvy or other deficiency or illness. The children were divided into two matched groups, and all children received 4 mg. of copper sulphate and 0.1 gm. of iron as soluble ferric pyrophosphate daily. Members of one group received also 100 mg. daily of ascorbic acid, the other group a lactose placebo. Food intake was uniform, and provided 33 mg. of ascorbic acid and 11 mg. of iron daily. Hemoglobin values rose to 14 gm. per 100 cc. in both groups, with no significant increase in erythrocyte production. Plasma ascorbic acid averaged 1.33 mg. per 100 cc. in the group which had received the supplement, and 0.63 mg. in the control group.

Nitrogen Metabolism of Pre-school Children

M. S. Lew, D. D. Clagett, F. L. Meyer and M. L. Hathaway—*J. Nutr.* 31: 665, 1946.

Eight pre-school children receiving 45 to 58 gm. daily of dietary protein absorbed 88 to 94 per cent. of the dietary nitrogen, retained only 3.3 to 9.8 per cent. Supplementation with 100 mg. of ascorbic acid or 3.38 gm. of potassium citrate did not affect nitrogen retention. However, nitrogen retention was increased by orange juice supplements equivalent to the ascorbic acid and citrate supplements.

Phosphorus Metabolism of Pre-school Children

B. V. McKey, M. F. Clark, F. L. Meyer and M. L. Hathaway—*J. Nutr.* 31: 657, 1946.

Eight pre-school children receiving diets containing 57 to 76 mg. per kg. daily of phosphorus retained an average of 3.5 to 10.8 mg. per kg. Supplements of ascorbic acid, potassium citrate or orange juice had no significant effect. The fluctuations are probably due to factors other than dietary.

Nutritional Aspects of the Milk Supply

W. E. Krauss—*Fed. Proc.* 5: 273, 1946.

In 1942 the quantities of milk not used directly for human consumption included 40 billion pounds of skim milk, 2 billion pounds of butter-milk and 2 billion pounds of whey. Even whey contains 77 per cent. of the riboflavin, 26 per cent. of the calcium, 32 per cent. of the protein

and 97 per cent. of the lactose of whole milk. Milk contains some amounts of all the essential nutrients, the non-fat portion is at least as important as the fat, and more total solids should be used for human consumption. Much of the skim milk fed to livestock could be used better as human food. The war-time shift from cream to milk consumption notably increased the nutritive value of the nation's dietary. It would be valuable to include more milk and dried milk in commercial and home-cooked bakery goods. Fortification of milk has been considered—only fortification with vitamin D being approved, and, in some special cases, fortification with ascorbic acid. Butter has been found a richer source of vitamin A than was supposed, having an average potency of 15,000 I.U. a pound, which may be still further improved by attention to food of cows. One goal for improving the national nutrition is the increasing of all forms of milk consumption, through "co-operation and concerted efforts of government education, science, and industry." "The incentive will be the knowledge that more equitable distribution of the vital food materials found in milk can do much toward improving the standard of living of the masses and help conserve the world's greatest natural resource, which is its people."

Present Knowledge of the Vitamin B-Complex in Human Nutrition (Part I)

Nutr. Revs. 4: 130, 1946.

The list of B vitamins now includes thiamine, riboflavin, niacin, pyridoxine, pantothenic acid, biotin, L. casei factor, and perhaps choline, inositol, and para-aminobenzoic acid. Thiamine prevents and cures beri beri, including beri beri heart disease and polyneuritis. The human requirement for thiamine recommended by the U.S. Food and Drug Administration is 0.23 mg. per 1000 cal., by the National Research Council is 0.5 mg. per 1000 cal. The need for thiamine is increased by increased metabolism, impaired assimilation, and high carbohydrate intake. Thiamine is not needed to metabolize alcohol. Its function is to aid in the metabolism of pyruvic acid, as part of the enzyme cocarboxylase. Riboflavin deficiency causes glossitis, cheilosis, seborrheic dermatitis and corneal vascularization. The daily allowance now recommended is 0.6 to 0.7 mg. per 1000 cal. It is a constituent of several enzymes. Niacin cures pellagra and a macrocytic anemia often found in persons with "para sprue." Urinary excretion of "F₂" N-methylnicotinamide, may be a measure of nutritional status in respect to niacin. The recommended allowance is tentatively set as 10 mg. a day.

Present Knowledge of the Vitamin B-Complex in Human Nutrition (Part II)

Nutr. Revs. 4: 163, 1946.

Trials of pyridoxine in man for muscular weakness, epilepsy, certain kinds of dermatitis, and the nausea and vomiting of pregnancy have been disappointing so far. From studies with microorganisms it appears to have a function in amino acid metabolism. Pantothenic acid deficiency in man has no symptoms recognized so far. Pantothenic acid is not effective against achromotrichia, although its deficiency results in greying of fur of many experimental animals, and various other symptoms. It may be part of an enzyme system, perhaps concerned with glucose utilization. Biotin deficiency in man has been shown not to be of benefit in cancer—symptoms reported include pallor, atrophy of lingual papillae, lassitude, sleeplessness, anorexia, electrocardiographic changes and anemia. Biotin is necessary for reproduction in the rat. It may function in lactate and pyruvate metabolism. Lactobacillus casei factor has been variously called folic acid, vitamin B₁₂, and vitamin M. It is a hematopoietic factor for man, effective for sprue, pernicious anemia and other anemias and perhaps in the leukopenia caused by radiation. Choline deficiency may be one of several dietary deficiencies contributing to hepatic cirrhosis—it appears to be accompanied by lack of phospholipid for transport and metabolism of fat. Inositol may have a synergistic action with choline in correcting fatty livers. It has been suggested that it may form a complex with vitamin E in the body. Para-aminobenzoic acid antagonizes sulfonamides. It is not yet universally recognized as a vitamin.

The Vitamin B Complex: Introductory Survey

L. J. Harris and E. Kodicek—*Proc. Nutr. Soc.* 4: 81, 1946.

At least a dozen B complex vitamins are now recognized. Vitamin B₁ was isolated in 1926 and synthesized in 1937. Cocarboxylase, essential for the metabolism of pyruvic acid, is the pyrophosphate ester of vitamin B₁. Deficiency of this factor in man results in the disease beri beri and in polyneuritis. Nicotinic acid, or amide, is the pellagra preventive factor and is a component of two enzyme systems, codehydrogenase I and II. It is synthesized by the rat and by ruminants, but is required by man and many other species. Riboflavin acts as a hydrogen transporter in a number of enzyme systems. Clinical symptoms of deficiency include cheilosis and corneal vascularization. Pyridoxine, or vitamin B₆, appears to be involved in the synthesis of fat from protein and other biochemical reactions. Pantothenic acid is required by rats and mice for growth and the prevention of greying and by chicks for the prevention of the so-called chick pellagra. Para-aminobenzoic acid has been the subject of various claims—it may be a "secondary accessory," stimulating intestinal flora to produce essential factors. Inositol may have a similar role, and appears also to have a lipotropic action in rats and prevents alopecia in mice. Choline may not be a true vitamin. It acts in methylation. Biotin is apparently required by man and is inactivated by the antivitamin avidin which occurs in egg white. Folic acid and other anti-anemia factors are also members of the B group.

The Vitamin B Complex. Role of Members of the Vitamin B Complex in Enzyme Systems

J. H. Quastel—*Proc. Nutr. Soc.* 4: 92, 1946.

Vitamin B₁ was first shown in 1932 to be important in pyruvate metabolism. Disturbed utilization of pyruvate in nerve results in polyneuritis. Thiamine pyrophosphate combined with various protein molecules catalyzes a series of decarboxylations, oxidations, condensations, and transformations in the metabolism of pyruvate by the living cell. The magnesium ion plays a role in the oxidation of pyruvate by thiamine pyrophosphate, and potassium ions have been found to greatly accelerate the effect of magnesium. Adenylpyrophosphate is necessary for the synthesis of thiamine pyrophosphate from thiamine. Thiamine acts also in the oxidation of alpha-ketoglutarate and the oxidation of acetic acid. Nicotinic acid is a part of the co-enzyme of alcoholic fermentation. Co-enzyme combines reversibly with a variety of proteins which act in a number of oxidation-reductive systems, possibly including oxidation of natural amino acids. The presence of nicotinamide in the cell may protect co-enzyme from breakdown. Riboflavin is part of a number of oxidation-reduction enzymes. Flavoproteins are often a very high activity. Pyridoxine is concerned with amino acid decarboxylations and transaminations. A number of different enzymes acting on various amino acids have been shown to contain pyridoxine. Biotin may occur bound to proteins. Its possible role in metabolism is not known so far. Pantothenic acid may be concerned in some way with carbohydrate metabolism, but its action is not yet really understood.

The Vitamin B Complex. The Vitamin B₂ Complex and Anaemia

L. Wills—*Proc. Nutr. Soc.* 4: 140, 1946.

Microcytic hypochromic anemia has been produced in dogs and monkeys by riboflavin deficiency and in pigs by pyridoxine deficiency. Nutritional macrocytic anemia in man is discussed here as possibly due to a dietary lack of some vitamin B factor(s) which does not react with the intrinsic factor to form the liver principle, but is necessary for the functioning of the liver principle. It occurs in crude liver extract and is effective when given parenterally. It may be essential to the cellular enzyme systems necessary for maturation of erythroblasts.

Studies of Thiamine Metabolism in Man. I. Thiamine Balance. The Normal Requirement of Vitamin B₁ and the Role of Fecal Thiamine in Human Nutrition

B. Alexander and G. Landwehr—J. Clin. Invest. 25: 287, 1946.

The minimal requirement of a nutrient may be measured as the difference between that ingested and that excreted, which represents the least amount needed for metabolism and uncontrollable losses. For a normal man on a diet of 2400 cal. the minimal requirement of vitamin B₁ was found to be 0.44 mg. per 1000 cal. Fecal thiamine is largely within fecal micro-organisms. Thiamine and cocarboxylase given in retention enemas were not absorbed. Pyrimidine contents of some foods were determined.

Studies of Thiamine Metabolism in Man. II. Thiamine and Pyrimidine Excretion with Special Reference to the Relationship Between Injected and Excreted Thiamine in Normal and Abnormal Subjects

B. Alexander, G. Landwehr and F. Mitchell—J. Clin. Invest. 25: 294, 1946.

After thiamine administration, the urinary excretion is directly related to the size of the dose and may be computed from linear equations. Thiamine excretion differed from the normal in three subjects with diabetes mellitus and in one with hyperthyroidism. Excretion of thiamine and pyrimidine accounts for the administered thiamine. 35 mg. is probably the maximum dose useful for injection, for there is no increased tissue storage with higher doses.

The Role of Riboflavin in Migraine

C. B. Smith—Canad. Med. Assn. J. 54: 589, 1946.

Fifteen cases of simple migraine and four of ophthalmic migraine were treated with riboflavin: 5 mg. three times a day for several months, then doses adjusted to the varying needs of the patient or, in five cases, discontinued. Marked relief was obtained. Ocular fatigue was probably a factor contributing to the precipitation of migraine attacks.

Biosynthesis of Nicotinamide in Man

V. A. Najjar, L. E. Holt, Jr., G. A. Johns, G. C. Medary and G. Fleischmann—Proc. Soc. Exper. Biol. and Med. 61: 371, 1946.

Four subjects were maintained for three months on a diet of purified foods which supplied 1.5 to 2.0 mg. daily of nicotinamide. No signs of nicotinic acid deficiency developed, and urinary excretion of N-methylnicotinamide chloride remained unchanged. Administration of sulfasuxidine did not decrease the excretion of N-methylnicotinamide. It appears that nicotinamide is synthesized by intestinal bacteria which are not susceptible to sulfasuxidine.

Synergic Effect of Ascorbic Acid and Riboflavin on Penicillin *in vitro*

M. A. Jalili—Nature 157: 731, 1946.

Penicillin sodium was tested against *Staphylococcus aureus* with preparations of several vitamins. The activity of the penicillin was augmented by ascorbic acid and riboflavin, but not by thiamine or nicotinic acid. The amount of vitamins was rather higher than is commonly present in the blood, but clinical study may show this effect to occur in the body.

The Gut and Nutritional Deficiency

Annotations—Lancet 1944 II: 829.

Recent work presents increasing evidence that man's abundant intestinal flora is necessary for the synthesis of a part of his daily vitamin supply. Removal of a part of the intestine, diarrhea or sulfonamide ingestion may precipitate deficiencies of vitamin B₁ or of folic acid. There is also evidence that vitamin deficiencies (conspicuously niacin deficiency) may produce disorders which result in further failure of vitamin absorption, utilization or synthesis.

Synthesis of Vitamins in the Bowel

Leading Article—Lancet 1944 II: 854.

The recent work of various investigators demonstrating bacterial synthesis of vitamins and perhaps some amino acids in man is presented. Administration of the "sterilizing" sulfonamides has given a new method of study for this subject. Great variation is found: Different individuals may synthesize 0 to 100 per cent. of their requirement for a certain factor.

The Assessment of Vitamin A Nutrition

Nutr. Revs. 2: 312, 1944.

Evaluations of mild degrees of vitamin A deficiency are still unsatisfactory. The various tests and clinical signs do not agree well and cannot be considered based upon completely satisfactory and adequately controlled evidence.

Vitamin C Economy in the Human Subject

M. Pijoan and E. L. Lozner—Bull. Johns Hopkins Hosp. 75: 303, 1944.

The development of clinical scurvy in experimental studies is preceded by a fall in the ascorbic acid content of the white platelet layer of the blood. Reduction of this value does not begin until the ascorbic acid intake is very low, and is then continuous. To determine the critical level of intake, a subject was maintained at a platelet white cell ascorbic acid level of 25 mg. per cent., the lower limit of normal. The dietary intake required was 18 to 25 mg. per day, which protected against scurvy, for 21 months. Six subjects were saturated with vitamin C (400 to 600 mg. daily for 4 to 6 days) and then placed on a diet free of vitamin C but otherwise normal. None showed signs or symptoms of scurvy within five or six months.

Nutrition in Pregnancy

C. J. Lund—J. Am. Med. Assn. 128: 344, 1945.

The normal woman requires more of the dietary essentials when she is pregnant, although only approximate values have been determined. These needs should be met by diet, with possible use of 5,000 I.U. of vitamin A during the second trimester and 10,000 I.U. during the third, and vitamin K during labor or given to the infant. Severe dietary deficiencies certainly may jeopardize the health of the mother and her infant. The complications of pregnancy affect nutrition, perhaps even more than the converse, and may make dietary supplements necessary.

Protein Deficiencies in Pregnancy

R. E. Arnell, D. W. Goldman and F. J. Bertucci—J. Am. Med. Assn. 127: 1101, 1945.

The term protein deficiency is preferable to hypoproteinemia, because the latter term does not include depletion which is insufficient to lower blood proteins, and because it concerns blood protein and not the even more important tissue proteins. Diets of 400 unselected patients

were studied. 9.5 per cent. of these diets were found to be excellent, 11.5 per cent. good, 37.3 per cent. fair, 23.7 per cent. poor and 18 per cent. very poor or deficient (less than 42.5 gm. of protein a day). Idiopathic edema was four times as frequent in the deficient group as in those receiving at least 70 gm. daily, and their mean hemoglobin was 26 per cent. lower. The highest incidence of preeclampsia was in the deficiency group; and those receiving adequate protein appeared not only less apt to have toxemia, but much more responsive to therapy if toxemia occurred. Proteins are of great importance in maintaining resistance to infection. Still-births and neo-natal deaths are definitely greater in low protein groups, and high protein diets are of value in restricting weight gain in pregnancy. A detailed study is presented of 11 patients with massive edema in the last trimester of pregnancy due to nutritional protein deficiency which responded promptly to bed rest, transfusions and high protein diets.

Newer Concepts of Breast-Feeding

M. Witkin—Brit. Med. J., 1945, 1: 441.

To aid in successfully establishing breast feeding, it is recommended that a small amount of milk be expressed manually before nursing, thus opening the lactiferous ducts and ensuring ready flow of milk. Both breasts should be offered at each feeding for maximum stimulation of lactation: 5 min. on one side then 15 min. on the other is recommended, with never more than 20 min. for the total feeding. This procedure has been found more effective than that of attempting to empty the breast after nursing.

Protein Nutrition in Pediatrics

S. Z. Levine—Council on Foods and Nutrition. Special Article J. Am. Med. Assn. 128: 283, 1945.

Protein is of particular importance to children in supplying material for growth as well as for its many functions in the adult. Qualitative and quantitative requirements for growing children are discussed, and tables presented giving protein requirements for different ages, formulas for premature infants and amino acid compositions of common protein foods. Protein is important not only in health but also in malnutrition, reducing diets, ketogenic diets for epilepsy, diabetes mellitus, chronic diseases and convalescence. The coefficient of digestibility of protein is normally high, but in certain digestive disturbances, enzymatic casein hydrolysates are of value. Hypoproteinemia in disorders accompanied by edema requires administration in different ways. Food allergies are more common in infants and young children than in older people, and when protein foods must be avoided amino acid mixtures may be valuable.

The Requirement for Calcium During Growth

J. O. Holmes—Nutr. Abs. and Revs. 14: 597, 1945.

The utilization of dietary calcium, primarily—and the rate of growth, secondarily, determine the calcium requirement during growth. Utilization in the human is limited to about 25 per cent. of the amount ingested, with wide variations for both children and adults. The growth requirement appears to cover maintenance needs, and has been estimated for different periods by a variety of calculations. It is higher during infancy and the pubertal period of rapid growth; lower during pre-school years. From 6 to 13 or 14 years, the need increases from 100 to 200 mg. daily, or about 500 to 800 mg. of ingested calcium. At the peak of the growth spurt, the daily intake should be about 1.1 gm. By about 23 years of age the requirement falls to about 10 mg. per kilogram for the adult. Wide individual variations in utilization, growth and calcium stores necessitate caution in the application of these figures to any one individual.

The Effect of Vitamin A Deficiency on the Skin

Nutr. Revs. 3: 170, 1945.

Skin lesions, hyperkeratosis and atrophy of hair follicles have been accepted as signs of vitamin A deficiency. However, young rats receiving otherwise adequate diets with sufficient B complex and fats show no gross cutaneous lesions until very late stages. An inter-relationship has been shown between vitamin A and B complex. Rats on diets devoid of B complex, except thiamine, develop atrophic changes in the skin and appendages. A superimposed vitamin A deficiency results in areas of hyperkeratinization and other changes superficially resembling the skin lesions in the adult, though differing when studied microscopically. It is erroneous to try to apply findings in one species, as the rat, to another, as man.

Experimental Studies on Man with a Restricted Intake of the B Vitamins

A. Keys, A. Hinschel, H. L. Taylor, O. Mickelsen and J. Brozek—Am. J. Physiol. 144: 5, 1945.

Eight normal young men served as subjects and controls. After several months of standardization—for an experimental period of 161 days—one group was given diets containing 0.185 mg. of thiamine, 0.287 mg. of riboflavin and 3.71 mg. of niacin per 1,000 cal. The other four subjects received the same diet supplemented with 1.0 mg. of thiamine, 1.0 mg. of riboflavin and 10.0 mg. of niacin. Within a month the thiamine excretion was constant in both groups: averaging 7 micrograms (1.1 per cent.) for the first group and 114 micrograms (8.5 per cent.) for the second. Riboflavin excretion became constant in about two months for the restricted group, almost at once for the supplemented group—at 137 micrograms (12.1 per cent.) and 438 micrograms (22.5 per cent.) respectively. No differences between the two groups could be observed as to pulse changes on exertion, Harvard "physical fitness" test scores, strength, psychomotor functions, heart size, electrocardiograms, gastric emptying, basal metabolism, glucose tolerance, blood lactate at rest or following work or glucose ingestion, sensory and intellectual functions, personality evaluations; or a variety of clinical, ophthalmic and neuropsychiatric tests. Blood pyruvate levels indicated that the restricted group were on the borderline of thiamine inadequacy. Otherwise within the limitations of these experiments, it appears that these restricted vitamin intakes had no effect upon "fitness," "health" and personality.

Release of Vitamins by the Intestinal Flora

Annotations—Lancet, 1945, 1: 697, 1945.

From a survey of recent observations on vitamin synthesis by intestinal bacteria, it can surely be concluded that although not all of the vitamins so synthesized are made available to the host; "a variable but significant proportion" is so used.

Ascorbic Acid vs. the Common Cold

W. H. Manwaring—Editorial Comment, Calif. and West. Med. 62: 309, 1945.

In studies of common colds treated with 1 gm. of ascorbic acid daily, some arrest of the infection appeared to be achieved. It is suggested that massive doses of ascorbic acid may be effective during the early virus stage of the infection, but not after secondary bacterial infections become established.

Vitamin C in Hay Fever

Current Comment—J. Am. Med. Assn. 128: 595, 1945.

Recent trials of vitamin C therapy for hay fever and other allergic conditions show this treatment to be ineffective.

DIGESTIBILITY OF INFANT FOODS PREPARED FROM COWS' MILK *

The first stage in digestion of a milk food by an infant is coagulation. This occurs whether the infant is breast fed or is being fed artificially on a food, the basis of which is cows' milk. Human milk is naturally the standard by which the digestibility of other foods must be compared. In the infant's stomach human milk coagulates in very fine clots, under the action of both enzymes and the pH of the stomach contents—the latter becoming more acid as digestion proceeds. The proteins of human milk, mainly albumin and casein, are normally present in the range of 1.5% and of this, approximately 0.5% only, is casein. Cows' milk on the other hand has a protein content of approximately 3.5%, and of this 3.0% is casein.

Casein is coagulated by rennin and acids, but not by boiling. Albumin on the other hand is coagulated by heat and acid, but not by rennin. The high percentage of casein in cows' milk means more rapid coagulation in the stomach than with human milk, and unless the protein content is reduced by modification and its physical condition changed by special treatment, the clots formed are large and indigestible.

It was a natural thought in the day when modification of cows' milk for infant feeding was first suggested that the milk should be fully modified so that the ratio between the fat, lactose and proteins would be identical with that in human milk. But this overlooked the fact that the protein of the modified milk was largely casein, and that the amino acid structure of casein differed from that of albumin. In casein, certain essential amino acids are proportionately low and pediatricians, as the result of experience, recommend more protein in relation to the other constituents, when cows' milk is the basis of modification. It is considered that a modified milk mixture of the same total solids content as human milk, should have at least 2.1% protein in comparison with the approximate figure of 1.5% of human milk. While for nutritional reasons, higher protein is necessary in a modified infant food, because of this higher protein and the fact that it is largely casein, the physical state of the protein is of very great importance, as this has a bearing on the toughness of the curd formed when coagulation takes place. Otherwise the advantages gained nutritionally by using a higher protein could be offset by a reduction in digestibility.

One aim therefore in manufacturing a milk food for infants which can be readily digested, is to see that the protein is physically altered in its reaction to enzymes and acid, so that the natural toughness of the curd of cows' milk protein is reduced, when acted on by rennin. Pasteurisation of milk, which is essential in any case to destroy pathogenic organisms which may be present, has relatively little effect in softening the curd formed by rennin. Heat-treatment, to have an appreciable effect, must be taken to the stage of boiling. Homogenisation combined with heating is still more effective and, as will be demonstrated later, the special spray process of drying used in the manufacture of Lactogen and Vi-Lactogen, gives even better results than boiling a modified fluid milk for 10 minutes. This method of drying which combines pasteurisation, homogenisation and extremely rapid desiccation, not only gives a better digestibility factor, but also shows less vitamin destruction than the drastic treatment of 10 minutes boiling as normally practised under domestic conditions. These improved results come as the result of increasing the hydration or "water holding capacity" of the curd. Such curds are more voluminous and easily disintegrated. They are softer and more permeable to digestive juices.

* Nestlé Research Laboratory.

The obvious way in which the digestibility of an infant food should be tested, would be by properly controlled infant feeding studies. Experimentation along these lines, however, is limited by the difficulties involved, and by the need of avoiding any risk to the health or well-being of the infants concerned, by the procedure necessary to obtain the required samples. It is obvious that for rapid work under comparable conditions some method of carrying out "in vitro" tests is necessary—tests which can be regarded as strictly comparable and which will serve as a practical means of assessing the digestion characteristics of an infant food. For some years past, laboratory methods of measuring the toughness of the curd, formed in cows' milk by the action of rennin at fixed acidities, have been used. Figures were obtained which were recorded in terms of the "curd tension" of the milk. By using this test it has been found that the "curd tension" of different milks does vary, and that the "curd tension" can be affected by chemical and physical means, such as by the addition of salts, by precipitation of calcium, by homogenisation and by heat-treatment, etc. Undoubtedly, on general principles milks showing soft curd characteristics are more suitable for infant feeding, but results have been too variable to regard "curd tension" tests as a reliable means of measuring digestibility.

The latest technique for measurement of digestibility takes into account other factors which also influence digestion. Briefly, such experiments are carried out in special apparatus, controlled to resemble more closely the physical and chemical conditions under which gastric digestion takes place in the infant's stomach. An effort is made in such tests, not only to approximate the enzyme strength and increasing acidity of the gastric contents, but also to imitate the peristaltic constriction of the stomach during digestion, which influences, not only particle size, but also enzyme penetration and ultimate digestibility.

In experiments carried out in this laboratory which follow the lines of the technique evolved by Doan and Dizikes,* the method used is detailed in the following paragraphs, and a graph drawn from the results obtained.

In one group, cows' milk, boiled for 10 minutes after modification to a protein content comparable with Lactogen, is compared with diluted Lactogen. In the other, cows' milk, modified to 2.1% protein, and boiled for 10 minutes, is compared with diluted Vi-Lactogen at the same protein percentage.

The results obtained are shown graphically, in terms of the particle size of curd measured at hourly intervals up to three hours. This graph demonstrates visually, curd characteristics and progressive changes during digestion. Other work has shown that if milk is only pasteurised and not boiled, particle size is larger still than in the case of boiled milk.

A comparison of these graphs demonstrates that, even boiling for 10 minutes, does not give with modified cows' milk a result as satisfactory as that produced by the special process, used in the manufacture of Lactogen and Vi-Lactogen. This can only be attributed to the special methods employed in making these two infant foods.

Our trials were made in a water-bath held at a constant temperature of 99°F. The bath was fitted with a series of rubber tubes into which the milk to be tested was placed.

Artificial peristalsis was brought about by a mechanical device which, by a rhythmic, squeezing action on the thin-walled rubber tubes, gave comparable movement to each of the milks under test.

* DOAN, F. J. and DIZIKES, J. L.—Digestion Characteristics of Various Types of Milk Compared with Human Milk—Bulletin 428. Agricultural Experiment Station, State College, Pennsylvania.

Four tubes for each sample to be analysed were placed in the apparatus. After all tubes were in position, 6.0 ccs. of an artificial digestion mixture were added to each tube.

This mixture consisted of—

0.4 ccs. of normal hydrochloric acid

1.5 ccs. of rennin solution.

4.1 ccs. of a 0.3% of pepsin solution.

The tubes containing the digestion mixture were allowed to stand 5 minutes, in order to reach the bath temperature.

40 ccs. of the modified milk to be tested was added at the temperature of 99°F. to each of four tubes, and mixed well with the 6 ccs. of digestion mixture.

The milk was allowed to stand for 15 minutes during which time coagulation took place.

8 ccs. of 0.3% pepsin solution was then added to all tubes, and one tube removed from each group, for analysis.

This tube represented the zero digestion time.

The mechanical device for imitating peristalsis by squeezing the tubes was started, and run for three hours.

At half-hour intervals, 0.6 ccs. of normal hydrochloric acid was added to lower the pH.

These additions of acid lowered the pH from about 6.0 at coagulation to about 3.5 after 2½ hours. Each hour one of the remaining tubes was removed for analysis, i.e., at 1, 2 and 3 hours.

On removal from the bath, each of the four tubes concerned in the analysis, was carefully poured into a beaker, and 10 ccs. of 40% formalin added, and the contents made up to a constant volume of 75 ccs.

The curds were then allowed to stand in order to harden the particles for purposes of particle size measurement.

After 24 hours the contents of the beaker were carefully screened through a series of sieves mounted on a Buchner vacuum funnel, the latter being fitted with a No. 3 filter paper.

The size of the sieves used was 3, 10, 20 and 40 meshes to the linear inch respectively.

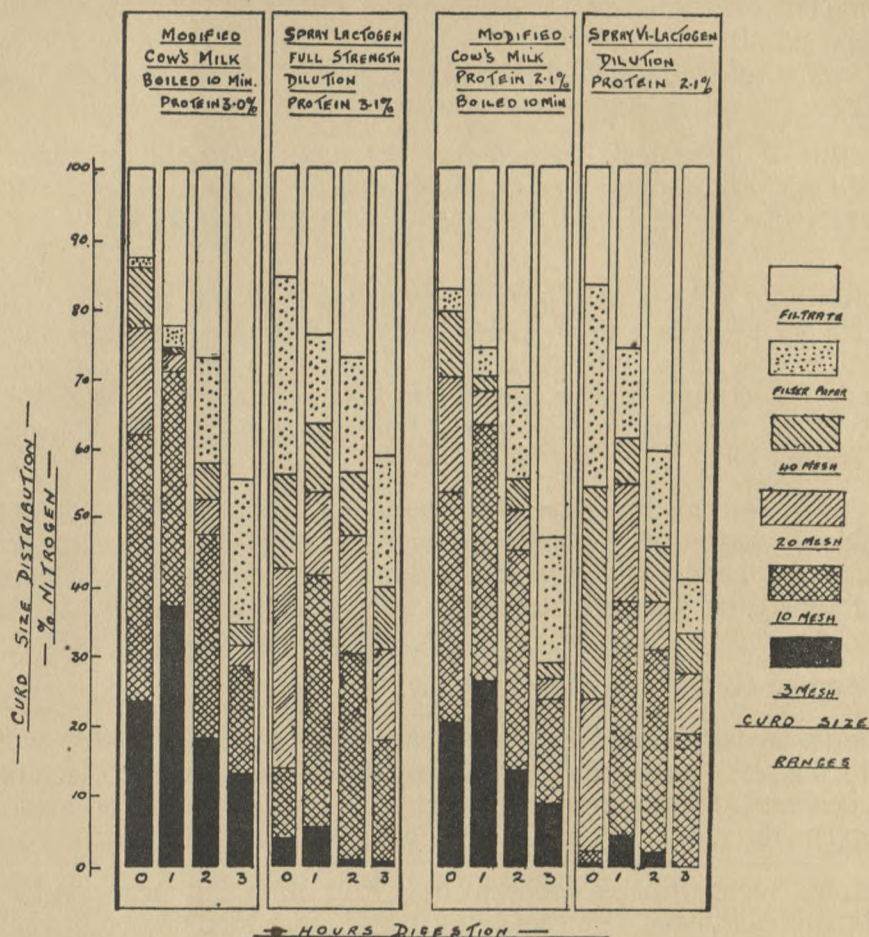
The curds on each sieve were washed thoroughly and the contents removed in rotation.

The curds held on each of the four sieves, plus those held on the filter paper, together with the filtrate itself, gave 6 graduated fractions for each tube.

A nitrogen determination on each fraction was obtained and expressed as a percentage of the total nitrogen as a means of gauging the amount of protein present.

A graph illustrating the percentage of nitrogen in each fraction was prepared and gives a comparison of the changes taking place during the period of digestion.

The darker the shading, the larger the particle size.



THE KEEPING QUALITY OF TINNED FOODS *

The earliest reference to the preservation of food in tins is as far back as 1810 or 1811. A few years after this, meat preserved in this way, was supplied to the British Navy.

In 1938, two tins, one of roasted veal and another of carrots and gravy, which had been packed in 1824, were opened after one hundred and fourteen years. The opportunity was taken to have these tins very carefully examined both chemically and bacteriologically by a selected body of scientists.

The practical result of these tests showed that the foods were still in edible condition and had retained their nourishing properties to a high degree. One surprising fact was that an appreciable amount of vitamin D still remained in the fat of the veal when compared with fresh veal fat.

No one of course wants to keep food in tins for one hundred and fourteen years! It is a fact that chemical changes take place to a variable extent in different types of tinned food on holding, and this action may affect the palatability while not being dangerous to health. In some foods the action is more rapid than in others; the keeping quality of a food is intimately bound up in the quality of the raw materials used and the skill and scientific knowledge controlling its preparation and packing.

The economical value of tinned foods to the community cannot be fully estimated. There has been a remarkable increase in the amount preserved in this way in recent years, because in this form foods can be made available which could not be purchased on account of price, lack of transport or the fact that they are out of season.

From the nutritive angle it has been proved that canned foods provide as complete and adequate a diet as can be obtained in any other way.

Most of the world's foodstuffs are seasonal. Many foods of course, such as wheat, can be carried over into the slack period of production without any special preservation. Both fresh milk and fruit, however, deteriorate rapidly, and it is well known that much more milk is produced in summer than in winter and fruit ripens only during a few months of the year.

The fact, therefore, that perishable foods such as fruit, milk and meat can be preserved is of enormous practical importance. It means a great deal more food can be produced with safety. It evens out the effect of good and bad seasons. It minimises waste and this means economy in the budget of the world's food requirements.

Sir William Savage is regarded as one of the most distinguished authorities on the subject of canned foods, and in a recent survey concluded that there was no evidence that canned foods have had their total nutritive value affected in any way.

On the subject of vitamins, he was of the opinion that there is plenty of evidence to establish that tinned foods are not, in general, inferior in respect of vitamins to the same foods after domestic cooking.

In his summary he states: "In some cases they are definitely superior. The view that canned foods are devitalised foods (whatever that may mean) is not supported by nutritional research. It can be definitely stated that canned foods are now considerably less liable than ordinary foods to be the source of food poisoning."

The value of having food in containers which are hermetically sealed is only fully realised in war time. Foods which were regarded by the housewife as a convenience or as a means of adding variety to a meal are now of paramount national importance.

* Contributed.

Troops must be fed in the field and in the fighting zones—in places where no fresh foods are available. Foods which will keep until required and which can be carried for thousands of miles in safety are as important as munitions. No army can fight unless it is fed.

No better example of this can be given than that of tinned milk and tinned meat, both of which are essential foods to the fighting forces.

To those who are concerned with the supply of food to the civilian population (and this means the housewife as well as the Government official), the length of time tinned foods can be expected to keep is of vital interest.

It is difficult to define what is meant by "keeping quality." Probably the simplest definition is that it should remain wholesome and retain its natural flavour and appearance.

There is no doubt that tinned meat and fruit have a long life. Condensed milks, both sweetened and unsweetened, should remain normal at least a year from the date of manufacture, but under wartime conditions, if the date of manufacture is not known, a good working rule would be to see that they are used within at least six months of purchasing and replaced from time to time with freshly purchased stocks.

Dried full cream milk and infants' foods are protected in the case of most reputable brands by an expiry date which is placed on the tin by the manufacturer simply to prevent old food remaining on the market. The date of expiry does not mean that the food is faulty as soon as the date has been reached, but, as no food can improve on holding, it is better to use these or any tinned foods within a reasonable period after purchase.

If a tin shows obvious signs of blowing or a definite escape of gas is noticed when opening, do not use it. Never use tins which have a cut or nail hole in the tinplate, or which seem to have an unusual smell. These are rare faults but they can happen.

Food such as meat, tinned fish or unsweetened condensed milk, or in fact any foods preserved solely by sterilisation, should be used shortly after opening. These foods, in order to be preserved, must be packed in absolutely airtight tins, and because the act of opening destroys the protection they should not be kept any longer than similar foods cooked in the home.

Foods such as jam or sweetened condensed milk are wholesome for several weeks after opening. This is because the cane sugar which is present has a definite preservative action. With these foods it is wiser to keep the lid up in order to allow a little circulation of air, but care must be taken to see that flies and dust cannot enter.

Milk powders keep well after opening also, but they tend to pick up moisture with exposure to the air, and on this account may go lumpy and develop unpleasant flavours. Therefore, in this case, keep the lid well closed and as a general rule try to use them up within at least a fortnight after opening.

Always keep tinned foods, both before and after opening, in a cool dry place, but do not freeze. The hotter the temperature of storage, the more quickly any food deteriorates.

After opening, any food can be held with safety in the tin in which it is packed. It is a popular misconception that it must be emptied into a glass or earthenware container.

SUMMARY OF THE KNOWN VITAMINS

Vitamin A—is a fat-soluble factor occurring particularly in fish liver oils, milk, butter and eggs. In addition, carotene or pro-vitamin A occurs in various green vegetables and in certain vegetable oils. The vitamin is growth-promoting and anti-infective. Deficiency leads to keratitis, xerophthalmia, night-blindness and reduced resistance to infection.

International unit—the growth-promoting activity for rats of 0.6 micrograms of standard β -carotene.

Vitamin B₁—aneurin or thiamin is a water-soluble factor found most abundantly in yeast, liver, certain cereals, especially in the bran and germ, meats, milk and eggs. The vitamin functions in carbohydrate metabolism and deficiency leads to beri-beri and polyneuritis.

International unit—the anti-neuritic activity of 3 micrograms of a standard preparation of crystalline aneurin hydrochloride.

Vitamin C—or ascorbic acid is water-soluble and found mainly in fruits and to a lesser extent in green vegetables. Deficiency of the factor leads to scurvy.

International unit—the anti-scorbutic activity of 0.05 milligrams of standard l-ascorbic acid.

Vitamin D—the oil-soluble anti-rachitic substance occurring in fish liver oils, milk, butter and eggs. The factor acts in the absorption of calcium and deficiency leads to rickets or osteoporosis.

International unit—the anti-rachitic activity of 1 mgm. of standard solution of irradiated ergosterol or 0.25 micrograms of crystalline Vitamin-D₂ (calciferol).

Vitamin E—oil-soluble and occurring in the embryos of seeds, especially grains or in green leaves. In rats, deficiency leads to sterility due to resorption of the foetus and there is evidence of similar action in the human subject.

Chemical identities— α - and β -tocopherols have been shown to be active but there is no international standard on account of difficulties of estimation.

Vitamin B₂ Complex—the water-soluble, heat-stable fractions of yeast and liver. The complex has been split into a number of fractions including:

Lactoflavin (riboflavin) a yellow pigment functioning in carbohydrate metabolism and probably tissue respiration. The factor occurs most abundantly in yeast, liver and milk, and exercises a growth-promoting action in rats. There is little knowledge of effects of deficiency and no international unit.

Pellagra-Preventing Factor—probably identical with nicotinic acid which prevents or cures pellagra in man and black-tongue in dogs. Known rich sources are liver, yeast and certain grains, although maize is deficient in the factor.

Vitamins B₃, B₄, B₅ and B₆—Vitamin H and Factors I, Y and W are little-known components of the Vitamin B₂ complex, considered necessary for normal nutrition of rats and/or pigeons.

Vitamin K—a fat-soluble vitamin occurring in certain green leaves and decomposing fish meal, necessary to prevent hæmorrhagic diseases in chickens and probably required in man.*

Vitamin P—a flavone compound occurring in citrus juices and red pepper and thought to have an effect on capillary permeability. It is probably required in man and functions in conjunction with Vitamin C.

Vitamin F—is used to describe certain unsaturated fatty acids, especially linoleic acid, which have been thought to have an action on the epidermal structures and on the growth of the rat.

It should be noted that vitamins A, D and E, each are known in several different chemical forms which are not necessarily of equal activity.

* Chemical identification, while by no means complete, has advanced to the stage at which it can reasonably be considered that at least much of the activity due to Vitamin K, can be attributed to one or more quinone derivatives.

Vitamin Chart

VITAMIN A

(The anti-ophthalmic anti-infective Vitamin—Oil-soluble—Heat-stable, cooking or drying at usual temperature has little effect—Oxidises at higher temperatures)

Prevents infections (especially of eye and respiratory system), promotes growth and long life, appetite and digestion, and maintains vigour. It is essential for normal reproduction and lactation and for maintaining the integrity of epithelial tissue. Deficiency may result in gland and sinus infection, kidney, ureter and bladder calculi, diarrhoea, physical weakness, etc.

VITAMIN B (B₁)

(The anti-neuritic,
anti-beri-beri Vitamin—
Water- and alcohol-
soluble—Heat-labile,
especially in alkaline
solutions)

Promotes appetite and digestion, as well as growth, by improving metabolism, and also tonicity of the digestive tract.

It protects against nerve disease, e.g. polyneuritis and beri-beri, and is necessary to the mother for normal reproduction and lactation.

Deficiency may result in impaired digestion and growth, loss of weight and vigour, subnormal temperature, fatigue, loss of muscle co-ordination, paralysis of limbs, indigestion, constipation and colitis.

VITAMIN C

(The anti-scorbutic
Vitamin—water-soluble—
Readily oxidised at
higher temperatures)

Protects against scurvy. Also necessary for the proper metabolism of bones and normal tooth development and maintenance. Deficiency leads to scurvy, hæmorrhages of mucous membrane, skin, joints, and bone marrow; spongy gums, painful swelling of joints, bone fragility, decalcification, caries, fatigue, etc.

VITAMIN D

(The anti-rachitic
Vitamin—Oil-soluble—
Heat-stable—Fairly
resistant to oxidation)

Regulates absorption and metabolism of the Calcium and Phosphorus needed for bone formation. Similarly regulates mineral metabolism of teeth and bones. It is necessary to the pregnant mother to prevent rickets in the young.

Deficiency results in rickets and bone deformity, enlargement of the joints, beading of ribs, softening of cranial bones, etc., as well as muscular weakness, nervous instability, dental caries and so on.

VITAMIN E

(The anti-sterility Vitamin—Heat-stable, cooking, drying or sterilising has little effect—Susceptible to oxidation)

Necessary for normal reproduction, influencing normal maturation of germ cell in male and normal placental function in the female.

Deficiency leads to death and resorption of the foetus.

VITAMIN G (B₂)

(The anti-pellagic
Vitamin—Water- and
alcohol-soluble—
Heat-stable)

Pellagra-preventive. Recent work points to the fact that other factors play an important part in prevention and cure of pellagra. Deficiency may cause alimentary disturbances, dermatitis, inflammation of the tongue and mouth, diarrhoea and nervous and mental disorders.

In the following table, adapted largely from "Vitamins: A Survey of Present Knowledge," Medical Research Council Special Report Series No. 167, 0 indicates the Vitamin has not been found, + that the Vitamin is present, ++ that the food is a good source, and +++ a rich source of the Vitamin. No sign indicates that the Vitamin content of the food has not been studied. The "Water-soluble B complex" has been included and only where the B₁ and B₂ (G) fractions have been estimated suitable entries have been made.

FOODSTUFFS.										FOODSTUFFS.										FOODSTUFFS.									
OILS, FATS, AND MEATS.										CEREALS, SEEDS, NUTS & VEGETABLES.										FRUITS, EGGS, MILK & MISCELLANEOUS.									
Beef Fat	++	0	..	..	..	+	..	..	..	Barley, husked .. .. .	..	..	++	..	0	..	0	..	..	Duck Eggs, fresh	++	..	+	++	++	..	++	..
Butter Fat (pasture) .. .. .	++	..	..	..	0	++	++	..	..	Bread, wheaten, white, water	0	..	+	+	0	..	0	..	..	Hen	++	..	+	++	++	0	++	+
.. .. (dry feed) .. .. .	+	..	..	..	0	+	+	..	..	" .. .. milk .. .. .	+	..	..	..	0 to +	..	0	..	..	" .. .. yolk	++	..	+	++	++	0	++	..
Cod Body Oil .. .. .	++	..	..	..	..	..	..	..	..	" .. .. wholemeal, water	+	..	++	++	0	..	0	..	..	" .. .. white	0	..	+	++	++	0	0	..
Cod Liver Oil .. .. .	+++	..	..	..	..	+++	0 to +	..	..	" .. .. milk .. .. .	+	..	..	..	0 to +	..	0	..	..	Buttermilk .. .. .	+	+	..	..	0 to +	..	..	..
Eel Body Oil .. .. .	++	..	..	++	..	..	..	..	..	Maize, white, embryo	0	..	+++	+	0	..	0	..	..	Cheese, Amer. Cheddar	++	..	0	+	..	..	..	..
Haddock Body Oil .. .. .	+	..	..	++	..	..	..	..	..	" .. .. whole grain	0	..	++	+	0	..	0	..	..	" .. .. skim milk .. .. .	+	..	..	..	..	0 to +	+	varies
Salmon Body Oil	++ to ++	..	..	++	..	..	..	..	..	" .. .. yellow, whole grain	++	..	++	+	0	0 to +	+	..	..	Cow's Milk, whole, fresh	+ varies	..	+	++	+	0 to +	+	varies
Salmon Liver Oil .. .. .	+++	..	..	..	..	++	..	..	..	Oats, husked	0	..	..	..	0	..	0	..	..	" .. .. condensed .. .. .	++	+	+	..	+	..	..	..
Sardine Body Oil	0	..	..	..	..	++	..	..	..	Oatmeal	0 to +	+	..	..	0	..	0	..	0 to +	" "	varies	++	..	..	0 to +	0 to ++	+	varies
Halibut Liver .. .. .	+++	..	..	..	..	++	..	..	..	Rice, polished	0	..	0	0	0	..	0	..	0 to +	" "	varies	++	..	..	0 to +	0 to ++	+	varies
Herring Liver .. .. .	++	..	..	..	..	+++	..	..	..	" .. .. polishings, alcohol ext.	+	..	+++	++	0	..	0	..	..	" .. .. " .. .. .	varies	++	..	..	0 to +	0 to ++	+	varies
Shark Liver .. .. .	++	..	..	..	..	+++	..	..	..	Wheat Bran	+	..	++	++	0	..	0	..	..	" .. .. " .. .. .	varies	++	..	..	0 to +	0 to ++	+	varies
Salmon, canned .. .. .	+	..	..	..	..	..	..	..	..	" .. .. Flour, white	0	..	0	0	0	..	0	..	..	" .. .. " .. .. .	varies	+	..	..	+	..	..	..
Lard	0 to +	..	..	..	0	0	0	..	..	" .. .. wholemeal	0 to +	..	+	+	0	..	0	..	..	" .. .. " .. .. .	+ varies	+	..	..	+	..	..	..
Maize, yellow, oil	++ to ++	0	..	++	..	+	+++	..	..	Beans, green, canned .. .. .	..	..	..	0 to +	doubtful	..	0	..	..	" .. .. " .. .. .	+ varies	+	..	..	0 to +	0 to ++	+	..
Margarine, animal	0 to +	..	..	..	..	0 to +	..	..	..	" .. .. runner, green .. .. .	..	..	..	..	++ to ++	..	0	..	..	" .. .. " .. .. .	+ varies	+	..	..	0 to +	0 to ++	+	..
.. .. vegetable	0	0	..	..	0	++	..	..	..	" .. .. string,	++	+	+	+	++ to ++	..	0	..	..	" .. .. " .. .. .	0 to +	+	..	..	0 to +	0 to ++	..	0
.. .. with vitamins added	++	0	..	..	0	+	..	..	..	Peas, green	++	++	++	++	+++	..	0	..	..	" .. .. " .. .. .	0 to +	+	..	..	0 to +	0 to ++	..	0
Mutton Fat	+	0	..	..	0	+	..	..	..	" .. .. dried	++	++	++	++	+++	..	0	..	..	Goat's Milk .. .. .	+	+	..	..	+	0 to +	0 to ++	..
Olive Oil	0 to +	0	..	..	0	0 to +	+	..	..	" .. .. green, canned .. .. .	++	++	..	..	++	..	0	..	..	Human Milk	+	..	+	+	0 to +	0 to ++	+	..
Peanut Oil	0 to +	0	..	..	0	0	+	..	..	Soy Beans	+	+	+	++	0	..	..	..	..	Lactose, pure .. .. .	..	0	..	..	0	..	..	..
Petrel, Australian (stomach oil) .. .. .	..	..	..	..	..	++	..	..	..	Almond .. .. .	+	+	+	..	..	..	..	..	..	Cream	++ to ++	++	..	..	0 to +	+	..	..
Petrel, Fulmar (stomach oil) .. .. .	..	..	..	..	..	++	..	..	..	Peanut .. .. .	+	+	++	..	..	..	..	..	..	Cocoa	+ varies	..	..	..	0 to +	++ to ++	0	..
Soy Bean Oil	0 to +	..	..	..	..	++	..	..	..	Walnut, black .. .. .	+	+	..	..	..	..	..	..	..	Milk Chocolate .. .. .	++	..	..	..	..	..	..	..
Wheat Oil .. .. .	+	..	..	..	..	+++	..	..	..	" .. .. English .. .. .	+	..	..	..	..	..	..	..	..	Honey .. .. .	..	..	..	..	very low	..	..	..
Wheat Germ Oil .. .. .	+	..	..	++	..	+++	..	..	..	Artichoke, globe .. .. .	++	++	..	..	..	..	..	..	..	Marmalade (orange)	0	+	..	..	0	..	..	+
Bacon	0 to +	..	..	..	..	+++	..	..	..	Asparagus Tips, bleached .. .. .	+	+	..	..	+++	..	..	..	..	Molasses, cane .. .. .	++	..	..	..	0	..	..	+
Beef .. .. .	..	..	++	++	0 to +	++	..	..	..	" .. .. green .. .. .	++	++	..	..	++	..	..	..	..	Sugar, cane, pure	0	0	..	..	0	..	..	..
Chicken Liver .. .. .	..	..	..	..	+	++	..	..	..	" .. .. boiled .. .. .	+	..	..	..	+	..	..	..	..	" .. .. glucose, pure .. .. .	..	..	..	..	0	..	..	..
Fish, Fat, Muscle .. .. .	+	..	..	..	..	+	..	..	..	Cabbage, cooked .. .. .	+	..	..	..	+	..	..	..	..	Yeast, brewers' .. .. .	..	++	+++	+++	0	0	0 to +	..
.. .. Liver .. .. .	++	..	..	..	..	+++	..	..	..	" .. .. green, fresh .. .. .	++	++	++	++	+++	..	..	..	..	" .. .. Marmite .. .. .	..	..	+++	+++	0	..	..	..
.. .. Roe .. .. .	++	..	+	..	..	+++	..	..	..	Carrot, young, raw .. .. .	++	..	++	+	+	..	..	..	..	Apple	+	+	+	+	++ to ++	low	++	..
Ham	0 to +	..	+	++	..	..	..	..	..	" .. .. cooked .. .. .	..	+	+	..	++	..	..	..	..	Banana	++ to ++	..	+	+	++	++	++	..
Liver Extract, commercial .. .. .	..	..	++	+++	..	..	..	..	..	Cauliflower, cooked .. .. .	..	+	+	..	++	..	..	..	..	Cherry .. .. .	++	++	..	..	++ to ++	..	..	..
Meat Juice .. .. .	..	+	..	..	very low	..	..	..	..	Celery Stalk	0 to +	+	..	..	++	..	..	..	..	Date .. .. .	+	..	+	..	+	..	..	..
Mutton .. .. .	..	..	++	++	0 to +	..	..	..	..	Lettuce, green .. .. .	+	..	+	+	+++	..	..	..	..	Fig	+	..	+	..	+	very low	..	..
Ox Heart .. .. .	..	..	++	..	..	..	..	..	..	Onion	0 to +	..	+	+	++ to ++	..	..	..	..	Grape	+	..	+	..	++	++	++	..
.. .. Kidney .. .. .	..	..	..	+++	..	..	..	..	..	Parsley .. .. .	..	++	..	..	++	..	..	..	..	Grapefruit	+	+	+	..	++	++	++	..
.. .. Liver .. .. .	++	..	++	+++	..	++	..	..	..	Parsnip	0 to +	++	++	+	++ to ++	..	..	..	..	Lemon	+	+	+	+	++	++	++	..
Oysters .. .. .	++	++	+	..	+	..	..	..	..	Potato, raw	+	..	++	+	++ to ++	..	..	..	..	" .. .. Juice	0	..	..	..	++	++	++	..
Pig Liver	++ to ++	++	..	..	++	+	++	..	..	" .. .. cooked .. .. .	+	..	..	..	++ to ++	..	..	..	..	" .. .. Juice	0	..	..	..	++	++	++	..
Pork	0 to +	..	++	++	0 to +	..	..	..	..	Pumpkin .. .. .	++	+	..	..	++	..	..	..	..	Orange Pulp .. .. .	..	+	++	+	++	..	..	+
Poultry	0 to +	..	..	..	..	..	..	..	..	Spinach, raw	++	..	+	++	++	0 to +	..	..	..	" .. .. Juice	+	+	+	+	++	++	++	..
Veal	0 to +	" cooked	++	..	+	++	++ to ++	Pineapple	++	..	+	..	++	++	++	..	
										Swede	+	+	" canned	++	++	++	++	..	
										" Juice	+++	" Juice	+	..	+	..	++	++	++	..	
																				Prune	+	..	+	..	++	++	++	..	
																				Tomato, ripe	++	++	+	+	+++	++ to ++	++	..	
																				" canned	++	++	+++	+++	+++	..	

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DIETARY STANDARDS OF THE FOOD REQUIREMENTS OF MAN

Recommended Daily Allowances for Specific Nutrients

Extracted by permission of the Council for Scientific and Industrial Research from Bulletin No. 178, p. 66, Food Composition Tables, compiled by Hedley R. Marston, Chief Nutrition Officer of the Council and Officer-in-Charge of the Animal Nutrition Laboratory of its Division of Animal Health and Nutrition and Mary C. Dawbarn, Biochemist of the Animal Products Research Foundation of the University of Adelaide, working in the Council's Nutrition Laboratory.

	Calories	Protein	Calcium	Iron	Vitamin A (a)	Thiamine (b) (Vitamin B1)	Riboflavin	Nicotinic acid	Ascorbic acid (Vitamin C)	Vitamin D
		gm.	gm.	mg.	I.U.	mg.	mg.	mg.	mg.	I.U.
Man (70 kg.):—										
Moderately active	3000	70	0.8	12	5000	1.8	2.7	18	75	(e)
Very active	4500	"	"	"	"	2.3	3.3	23	"	
Sedentary	2500	"	"	"	"	1.5	2.2	15	"	
Woman (56 kg.):—										
Moderately active	2500	60	0.8	12	5000	1.5	2.2	15	70	(e)
Very active	3000	"	"	"	"	1.8	2.7	18	"	
Sedentary	2100	"	"	"	"	1.2	1.8	12	"	
Pregnancy (latter half)	2500	85	1.5	15	6000	1.8	2.5	18	100	400-800
Lactation	3000	100	2.0	15	8000	2.3	3.0	23	150	400-800
Children up to 12 years:—										
Under 1 year (c)	100	3-4 per kg.)	1.0	6	1500	0.4	0.6	4	30	400-800
1-3 years (d)	1200	40	1.0	7	2000	0.6	0.9	6	35	(e)
4-6 years	1600	50	1.0	8	2500	0.8	1.2	8	50	
7-9 years	2000	60	1.0	10	3500	1.0	1.5	10	60	
10-12 years	2500	70	1.2	12	4500	1.2	1.8	12	75	
Children over 12 years:—										
Girls:—										
13-15 years	2800	80	1.3	15	5000	1.4	2.0	14	80	(e)
16-20 years	2400	75	1.0	15	5000	1.2	1.8	12	80	
Boys:—										
13-15 years	3200	85	1.4	15	5000	1.6	2.4	16	90	(e)
16-20 years	3800	100	1.4	15	6000	2.0	3.0	20	100	

These are tentative allowances toward which to aim in planning practical dietaries. These allowances can be met by a good diet of natural foods which will also provide other minerals and vitamins, the requirements for which are less well known.

(a) Requirements may be less than the amounts stated if provided as vitamin A, and greater if the source is chiefly the provitamin, carotene. (I.U. = International Units.)

(b) 1 mg. thiamine equals 333 I.U.

(c) Needs of infants increase from month to month. The amounts given are for approximately 6-18 months. The amounts of protein and calcium needed are less if from breast milk.

(d) Allowances are based on needs for the middle year in each group (as 2, 5, 8, etc.) and for moderate activity.

(e) Vitamin D is undoubtedly necessary for older children and adults. When not available from sunshine, it should be provided probably up to the minimal amounts recommended for infants.

THE PROBLEMS OF RAW MILK

The following summary of Section F—Milk-borne Diseases—of Biennial Reviews of the Progress of Dairy Science, ("J. Dairy Research," May, 1939) gives a concise review of recent milk-borne epidemic disease.

Streptococcal Infections.

It is now believed that the majority of these milk-borne epidemics arise not from direct contamination from a human source, but by contamination from a cow suffering from mastitis due to hæmolytic streptococci of human origin.

Davis clearly showed experimentally that streptococci from human sources, placed on teat surfaces, readily ascended the teat ducts infecting the bovine udder.

In Denmark, a cow responsible for a milk-borne epidemic excreted streptococci for 13 months (excluding a dry period of 3 months) and another involved in the Doncaster (England) epidemic excreted streptococci for 6 weeks, and in both cases there were periods when symptoms of mastitis were either not evident or not pronounced although the milk was known to be infective.

In the United States, in 1936, a severe epidemic of scarlet fever type occurred in Owego, N.Y., 511 contracting the disease from raw milk, and one cow suffering from mastitis was believed responsible.

In 1937 an outbreak of septic sore throat (645 cases) occurred at West Des Moines, Iowa. At least 312 persons had consumed milk from a source infected with hæmolytic streptococci from a bovine source.

Of 32 outbreaks in 1936-7, no less than 12 were believed due at least in part to bovine carriers. In England the last serious outbreak, a mixed type of infection, in which cases of scarlet fever and sore throat were both observed, occurred in Doncaster in December, 1936. The Penneberg outbreak in Germany was traced to a milker who had been in contact with a child with scarlet fever and was responsible for 450 cases with 8 deaths. Yet another outbreak in Denmark, of 100 cases of sore throat was traced to milk which had been infected by a cow suffering from mastitis due to Lancefield group A hæmolytic *Streptococcus*.

Staphylococcal Infections.

Recent investigations into the etiology of bovine mastitis have shown that numerous cows are infected with staphylococci, and it is a matter for surprise that outbreaks of staphylococcal food poisoning are not more prevalent. Gwatkin et al. examining a series of cattle found considerably more than half affected with mastitis and in about 30 per cent. of these animals the staphylococcus was incriminated. In two-thirds of the cases so incriminated the staphylococcus was the only pathogenic organism isolated.

In a series of 415 cows from 5 herds, no less than 34.9 per cent. were found to be infected and for some reason infection occurred much more frequently to hind than fore quarters of the udders.

Probably due to the frequently mild nature of many staphylococcal outbreaks of food-poisoning they pass unnoticed or are only notified to the authorities at such a late stage that satisfactory specimens for full investigation are no longer obtainable.

Outbreaks have been described in England associated with milk, custard and butter. In America, raw milk and milk products such as ice-cream, cheese, cream and custard, account for most of the recorded cases. Denison described one outbreak in a school of almost 700 students, of whom 165 ate cream puffs; 57 per cent. of these pupils were taken ill and also a further 28 cases outside the school occurred in people who had had some of the same food. Within four hours of ingestion, no less than 80 per cent. of the cases were ill, symptoms being vomiting (78 per cent. severe), pain in abdomen, diarrhoea, headache, muscle cramps and sweating.

Prevention of staphylococcal food poisoning by milk or milk products calls for heating, either to 80° C. for 15 minutes or 85° C. for 10 minutes to ensure destruction, and the greatest care taken to preclude re-infection.

An interesting observation is the fact that addition of starch to milk appears to enable staphylococci to more freely elaborate their entero-toxins.

Bovine Tuberculosis.

Griffith's interesting table, amended to include Griffith & Smith's figures shows a very variable percentage of bovine tuberculosis in an extensive series of observations, but it is noteworthy that in rural areas in parts of Scotland the figures are more than double those in city areas, 9.1 per cent. and 4.4 per cent. respectively.

While the findings of Griffith & Smith point to the consumption of raw infected milk as the chief source of bovine infection, Lange, who reported some 2 per cent. of all tuberculosis deaths in Germany to be of bovine origin, lays emphasis on the importance of contact with cattle, for instance dairy farm employees, in explaining the bovine type of infection.

Recently several actual tuberculosis epidemics have been described. Swedish observers associate erythema nodosum with tuberculosis and not as a manifestation of rheumatic disease. Törnell reporting on an epidemic in the summer of 1935, found 13 women factory hands aged 17 to 29 years all tuberculin-positive and with two exceptions, the lungs on radiological examination were negative. The single common food factor was the milk supply, later found to contain tubercle bacilli.

Similarly, Stahl reported in a small Swedish community, 50 persons, chiefly children, manifesting tuberculous infection and about three times as many tuberculin-positive, all using a common milk supply, one cow of the herd suffering from tuberculous mastitis. Of the infected persons, some showed high fever over several weeks, others enlarged cervical glands and still others erythema nodosum.

Salmonella Infections.

These infections are divided into two varieties, those with a typhoid-like symptomatology, and those with food-poisoning characteristics. The United States Public Health Reports summarise milk-borne outbreaks in the following table.

U.S.A. Milk-Borne Typhoid and Para-Typhoid.

			1936			1937		
			Epidemics	Cases	Deaths	Epidemics	Cases	Deaths
Typhoid	-	-	15	95	5	15	161	11
Para-typhoid	-	-	1	21	0	—	—	—

The last big epidemic associated with milk in England occurred at and around Bournemouth in 1936.

The Dublin variety of Salmonella is becoming more frequently associated with milk infections. In Wiltshire an outbreak in which more than 100 people were concerned was traced to bottled raw milk. The infection came from a single, apparently healthy cow, but the organism was repeatedly isolated from its dung.

Dysentery.

There have been only two dysentery epidemics reported as due to milk during the past two years, and one associated with ice-cream, a milk product.

In Hong-Kong, with a mortality of approximately 33 per cent., a number of young European children were affected, the Shiga bacillus being isolated from raw milk used. The second outbreak at Bedford, the symptoms being those of mild enteritis, was due to unpasteurised milk, found ultimately to be quite free from infection on the farm, but infection must have occurred on the retailer's premises. The milk was distributed to 106 households, of which 59 yielded one or more cases. The infecting organism in this instance was *B. dysenteriae* Sonne.

Brucella Infections.

The incidence of known cases varies considerably in different countries, the U.S. Public Health Service, and the Chief Medical Officer for the United States and for England respectively reported for the three years 1935-37 inclusive:—

				U.S.A.		England.	
				Cases	Deaths	Cases	Deaths
1935	-	-	-	2008	98	391	—
1936	-	-	-	2095	107	48	—
1937	-	-	-	2497	58	—	—

Hagan concludes that human infections necessarily imply contact with cattle, goats and swine and their secretions, and the risk of infection through contact with animals is definitely greater than through the consumption of raw milk or cheese.

The Milk and Dairies Order 1926 should, since it makes it an offence to "sell or offer or expose for sale any milk from a cow suffering from any infection of the udder or teats which is likely to convey disease," help to eradicate these infections.

Raw milk in the spread of disease.

Extract from a paper by Sir William Savage, at the Royal Sanitary Institute, ("Journal of the Royal Sanitary Institute," July, 1938).

"The facts have been stated so often that I confine myself to a short statement. Scarlet fever, diphtheria, paratyphoid fever and enteric fever have frequently been spread by milk; bacillary dysentery and acute food poisoning, rather rarely. Nearly always these diseases are spread from contamination of the milk with the special germ in question after the milk leaves the cow, but occasionally the cow is infected and so contaminates the milk.

"Outbreaks of septic sore throat spread by milk are comparatively rare, but may be very widespread, as in the Brighton-Hove outbreak, with over a thousand cases and more than 60 deaths, or in the one I investigated at Colchester, with over 600 cases. The source of infection is nearly always a cow infected with a special type of streptococcus of human origin first setting up a mastitis in the cow.

"Undulant fever in man is spread by milk through infected cows, and Professor Wilson estimates that there are about 500 cases annually. Tuberculosis in man of bovine origin is of special importance, and although there is evidence that the cases are diminishing, we cannot even now put the deaths at less than 1,700 per annum, with about 4,000 fresh infections each year, the latter involving an immense amount of suffering.

"These facts constitute a very strong case against the use of raw milk, and it is because of them that so large a proportion of the medical profession, including those in the public health service, is so insistent that these risks must be removed."

Milk-Borne Scarlet Fever in Denmark.

Extract from the "Lancet," May 6th, 1939.

"In describing a recent outbreak of scarlet fever in Denmark, Juel-Henningsen and Ernst paint a picture as vivid as that which H. H. Scott provides in 'Some Notable Epidemics.' If the plot of all these stories is more or less the same, the detective work entailed is always interesting.

"The Danish outbreak began with the notification of about 20 cases of scarlet fever in Vejle, a community of about 25,000 people. On April 14th, the outbreak culminated with the notification of about 40 cases. As most of the patients had been supplied with milk from the same dairy, its owner was questioned, and he was able at once to state which was the milk cart and which were the farms providing milk for the part of the town where infection had broken out. Medical inspection of the farms led to the discovery of a hitherto undiagnosed case of scarlet fever in a milkmaid whose hands were peeling, and one of whose ears was discharging pus.

"The prompt elimination of the milkmaid as a source of infection was doubtless the reason why the outbreak ceased as abruptly as it had begun. The bacteriological examination revealed Lancefield's group A and Griffith's type 3 *Streptococcus pyogenes* in the pus from the milkmaid and in 108 of the 118 cases of scarlet fever. As in most such outbreaks the infection of the milk is maintained by mastitis in one or more cows, diligent search was made for disease of the udders in those that had supplied the offending milk. But though every cow was examined twice at an interval of six days, and the aid of the State Veterinary Serum Laboratory and of the State Serum Institute was invoked, neither the cows nor their milk proved to be infected.

"The milkmaid therefore seems to have been alone responsible for this outbreak, and it is remarkable that though raw milk is a poor culture-medium for the germ in question, and the cows did not co-operate in spreading the infection, she still succeeded in giving scarlet fever to 118 persons and angina faucium to about 50 others."

Outbreaks of Sonne Dysentery due to Raw Milk.

Summary of a report by Trimble & Brothwood ("Brit. Med. Jour.," 31/12/1938).

The outbreak occurred in Preston Rural District on January 26th, 1938, and no fresh cases were reported after the milk supply was stopped on February 1st, except for two secondary infections. A total of 21 persons were affected out of 86 who were exposed to risk.

The symptoms were diarrhoea, slight abdominal pains and slimy stools, but no blood was visible. The cases were limited to the consumers of milk from one farm which had no cattle added for

over a year, and no person at the farm had previously suffered from a similar illness, although during the outbreak four of the farm employees became affected.

Bacteriological examination of the fæces of infected persons confirmed that the outbreak was due to the Sonne Dysentery organism, and it was found that in some individuals a carrier state lasting some weeks was established. Two of the 21 persons were still excreting the organisms after five weeks.

It was not possible to establish the exact source of contamination of the milk. The water used for washing the utensils was of very poor bacteriological quality and was thought to be responsible; its further use for this purpose was forbidden. None of the cows were examined bacteriologically, but since the measures which had already been taken were successful in preventing further cases it seems that this factor was not involved.

The Milk Problem.

Extracts from the Bulletin of the Health Organization—League of Nations—(Vol. VI., No. 3, 1937).

"In most countries of Europe, extensive disease prevails among the cattle. So far as milk hygiene is concerned, the three most important diseases are tuberculosis, contagious abortion and mastitis. Generally speaking, the spread and gravity of these diseases has gone hand in hand with the development of intensive milk production."

"Milk frequently contains pathogenic organisms derived from (a) the diseased udder of the cow, or occasionally the cows' fæces or uterine discharge; (b) a human case or carrier, the infection usually coming from the nasopharynx or the intestine, and gaining access to the milk by sneezing, coughing, etc., or by contaminated fingers, (c) a contaminated water-supply, (d) sometimes perhaps from rodents."

"During the years 1912-1935, records are available in Great Britain of the occurrence of 103 milk-borne outbreaks of scarlet fever, septic sore throat, diphtheria, typhoid fever, paratyphoid fever, dysentery and gastro-enteritis, affecting about 12,000 persons. During the same time, it is estimated that about 150,000 persons contracted tuberculosis of bovine origin, of which over 60,000 died, while an unascertained number, probably several thousand, suffered from undulant fever due to infection with Br. abortus."

"Our information for other countries is even less complete than that for Great Britain, but, such as it is, it points to the existence of a considerable amount of milk-borne disease, much of which is at present being overlooked. In Denmark, for example, where serious attention has only recently been devoted to the investigation of this problem, approximately 10% of all deaths from tuberculosis appear to be due to infection of bovine origin. About 500 cases of undulant fever occur annually, of which a considerable proportion is due to the consumption of infected milk. In addition, during the three years 1934-1936, nine outbreaks of epidemic milk-borne disease have occurred, affecting over 10,000 persons."

"No raw milk can ever be regarded as completely safe for human consumption. Even if produced from healthy animals, milk is so subject to contamination from human and other sources that it must always be regarded in the raw state as a potentially dangerous article of food. The only satisfactory method of ensuring the final safety of the product is to submit it to some form of heat treatment that can be relied on to destroy any pathogenic organisms that may be present."

THE NUTRITIVE VALUE OF MILK AND MILK PRODUCTS

Biological Values of Milk Products.

Henry, Houston, Kon & Osborne, ("J. Dairy Research," May, 1939), working with Evaporated Milk, Spray Dried Milk and Roller Dried Milk, reported no significant difference between the biological values of the proteins in the three processed milks.

No significant difference was found between the digestibility of the proteins of roller and spray dried milk, but those of evaporated milk were less digestible. A highly significant difference between the Vitamin B₁ content of evaporated milk (approximately only half) and roller and spray dried milk was recorded.

In animal experiments the dried milks were found significantly superior.

No loss of Vitamin A or of carotene, was found during processing and moreover, no decrease was found after one year's storage of the processed milks. Similarly there was no loss of riboflavin content in processing or even after sixteen months' storage.

In spray-drying a loss of 20% of the Vitamin C content of the milk was recorded, as compared with 30% loss during roller drying and evaporation. Little further change in the Vitamin C content of roller dried milk was discovered, while in spray dried milk it declined slightly after seven months' storage, and in evaporated milk there appeared to be a more definite and gradual loss. Since it is now customary to supplement Vitamin C even in breast-fed infants, this destruction seems of little moment.

The Nutritive Value of Milk — Calcium Supply.

Sir. J. B. Orr, in his work "Food, Health and Income," 1936, first drew serious attention to the fact that calcium shortage was a characteristic of most diets, particularly in the poorer classes. He found that in mixed diets about two-thirds of the total calcium is usually derived from milk. Leitch, in a critical review of the calcium requirements of man, worked on this assumption and decided that the daily requirement of milk was 500 ml. from the age of six months to nine years, increasing to 1050 ml. for 15-17 years of age and then decreasing to 300 ml. for adults. For pregnant and nursing women he calculated that 800 ml. daily was required ("Nutrition Abs. & Rev.," Jan., 1937).

Howard et alia ("B. Med. J.," 8/1/38) confirmed that the diet of the poorer classes was seriously deficient in calcium. They tried the effect of graded doses of a mixture of salts of calcium and phosphorus and of milk on the growth of rats on a typical diet and concluded: "The salt mixture had no significant influence on the increase of weight of rats, but the doses of milk had a distinctly beneficial effect."

Widdowson ("J. State Med.," Aug., 1937) remarks: "Calcium is in many ways the outstanding mineral element. Its rôle as bone and tooth building material is obvious and striking, but the body needs calcium for many vital processes apart from the strengthening of the skeleton. Calcium is necessary for the clotting of the blood after injury and for maintaining the rhythmic action of the heart. In adults the bones become to some extent a reservoir for calcium which

can be drawn upon to replenish the soft tissues and fluids in times of emergency. In the young, however, there must be a liberal supply of calcium for the developing bones and teeth. The most important source is undoubtedly milk, and a milkless diet is usually a very low calcium diet."

Influence of Milk on Utilisation of Proteins.

The experiments of Mitchell et alia ("Fundamentals of Dairy Science") illustrate the value of milk as a supplementary food especially in increasing utilisation of proteins from other sources.

They found that the proteins of maize, when present to the extent of 10% of the diet, showed 61.3% utilisation. Milk protein under similar conditions showed the high value of 84.7%. When, however, the 10% protein of the diet was composed of 7.5% maize protein and 2.5% milk protein, the total utilisation was 75.7%, which is much higher than the weighted mean and indicated an increase in the utilisation of the maize protein from 61.3% to 72.7%.

It is only reasonable to assume that deficiencies of certain amino-acids in the maize protein have been made good by the milk in order to render possible such a large increase in the biological value of the protein of maize.

The Value of Milk as a Protective Food.

The Technical Commission of the Health Committee of the League of Nations, in a recently published report ("Physiological Bases of Nutrition") record the fact that "the deficiencies of modern diets are usually in the protective foods rather than in the strictly energy-bearing foods"; the former being defined as being especially rich in "good" protein, vitamins or minerals.

"Among the protective foods are, first and most important, milk and milk products (including butter), eggs and glandular tissues; then green-leaf vegetables, fruit, fat, fish and meat (muscle)."

Milk is acknowledged to be a "rich source of calcium salts, phosphate and of Vitamin B₂, also a good source of Vitamin B₁, whilst milk fat is an excellent source of Vitamin A." Moreover, the proteins of milk are not only of the highest nutritive value but also improve the utilisation of protein derived from cereals or vegetables, and the report includes the note that:—

"Milk should form a conspicuous element of the diet of all ages. The Commission commends the tendency manifested in some countries to increase the daily intake up to one litre per day for pregnant and nursing women, as well as to provide an abundant supply for infants, children of all ages and adolescents."

(Extracts from the First Report of the Advisory Committee on Nutrition.—Ministry of Health, H. M. Stationery Office, 1937.)

"Milk is of such outstanding value that the consumption of a sufficient quantity of it may be regarded as the key to proper nutrition. Every one of the constituents of milk possesses high nutritive value and it is, therefore, most desirable that all of these should be utilised for human nutrition, more especially because the diets of many people are deficient in the nutrients supplied by milk and certain of its products. Moreover, cows' milk, the most complete food known, is elaborated from vegetable matter of little or no value for human nourishment"

"Cream and butter are preparations containing higher concentrations of the fat and Vitamins A and D than milk itself. It is on these constituents that the food value of cream and butter chiefly depends. As they are not complete foods the proper place for cream and butter is as items in a mixed diet in which they make good the deficiencies of other foods in fat and in Vitamins A and D. The fats of milk are especially valuable for human nutrition."

"A food which contains all the materials essential for growth and maintenance of life in a form ready for utilisation by the body is obviously of high value. Milk alone is the food which in itself nearly fulfils these conditions, being elaborated by the mammalian mother as the sole nutriment of her offspring during the period of most rapid growth."

"The composition of cows' milk . . . contains the energy-giving nutrients, protein, fat and carbohydrate; all the known essential Vitamins, calcium, phosphorus, iron, sulphur, iodine, magnesium, potassium, sodium, chlorine and copper, some of the physiological rôles of which are known, and a number of other elements, present only in minute amounts, such as manganese, zinc, and fluorine, the exact functions of which are not fully understood, but which would seem to be as necessary for normal nutrition as any of the other constituents. Even if it were possible to state the chemical composition of milk in full a very imperfect idea of its nutritive value would be obtained, because it would leave unmentioned many important physico-chemical and biological properties on which its high nutritive value largely depends. For example, the physico-chemical states of its constituents make for easy digestion and assimilation; the relationship of the different constituents to one another ensures normality of bodily function; the nature of its protein and of its mineral elements, notably calcium and phosphorus, and its high content of other inorganic elements and vitamins make for satisfactory growth and give it a very high value as a protection against disease."

"The fact that milk is a valuable human food, particularly when new tissues are being formed, has been recognised from the earliest times. Within recent years much experimental evidence has been brought forward, which has shown that cows' milk is the most valuable food known for the promotion of growth and health in children. . . . From the results of these and many other experiments too numerous to mention, on man and animals, it can be predicted that important beneficial effects would result from an increase in the consumption of milk above that at present prevailing in this country"

"Milk is in itself a well-balanced mixed diet. Its few disadvantages, which vary with the age of the person for whom it is intended, are easily overcome. All babies should be brought up on their mother's milk, but after breast feeding ceases, although cows' milk ought to form the bulk of the diet, this should be supplemented with iron, Vitamins D and C, preferably given in the form of natural foods, such as egg-yolk, orange juice and cod-liver oil. For children, adolescents and adults, a diet of milk alone is undesirable because it is deficient in energy-giving constituents relative to its bulk. For these it should be regarded as an important item in a mixed diet and not as a complete food; but on account of its growth-promoting properties it should form a larger proportion of the diet of children and adolescents than of that of adults. The expectant mother has to elaborate from her food the materials necessary for the growth of her offspring, while the nursing mother has to secrete milk to serve as the only food of her infant for at least six months. The milk requirements of the expectant or nursing mother are of a similar order to those of the growing child."

DRIED MILK

Some Medical Opinions.

(Extract from "The Infant," by Eric Pritchard, M.A., M.D., F.R.C.P., 1938).

"The time-honoured belief in the virtues of raw milk for the feeding of infants still survives in certain quarters, in spite of all the scientific evidence which proves that such virtues are quite illusory. It is, perhaps, unnecessary to point out that since dried milks, which are, of course, cooked milks, have largely superseded dairy milk — for the most part raw — in the feeding of infants, the Infant Mortality Rate in this country has steadily fallen. There are naturally many other factors besides the mere cooking of milk concerned in this highly satisfactory result, but it is quite certain that if the heating of milk seriously impaired its nutritive qualities this result would never have been achieved. The effect of heat on the nutritive properties of the various elements contained in the milk is insignificant, excepting in the case of Vitamin C, the anti-scorbutic element, which undoubtedly deteriorates under the influence of heat and oxidation, but since an independent supply of this Vitamin is invariably provided in all cases of artificial feeding, this is no argument against the use of sterilized milk if sterilization has independent advantages. As regards this latter point there cannot be two opinions. The greatest danger that exists for young infants is infection, and there can be no question that raw milk is the most prolific medium for the conveyance of infection."

(Extract from a communication from Dr. H. Kerr—"Medical Officer"—30/4/32).

"While it is not contended that dried milk is superior, or even as good as the very best and purest fresh milk, this latter is of such exceptional occurrence that dried milk is an infinitely purer and cleaner article for the use of the average family than the ordinary retail milk. That it is deficient in anti-rachitic vitamin is a mischievous assertion, founded upon insufficient knowledge. Very particular attention was paid to this point before it was ever decided to use dried milk in Newcastle, the very highest scientific assurances being first obtained."

(Extract from "Recent Advances in Diseases of Children," by Wilfred J. Pearson, D.S.O., M.C., D.M., F.R.C.P., and W. G. Wyllie, M.D., M.R.C.P.).

"There are advantages in the use of dried milks instead of the fresh variety. They are practically sterile, and are certainly to be preferred to contaminated fresh milk. The percentage of ingredients is known within reasonable limits. The nutritive values seem to be uninjured; indeed, it is probably improved, both because of the alteration in the protein, the casein being divided into minute particles during the process, and because the size of the fat globules is reduced during manufacture. The keeping qualities also are excellent. It is claimed that none of the Vitamins (A, D, B, or C) is impaired in the process."

"VI-LACTOGEN" PROCESS OF MANUFACTURE^{*}

The vitamin content of milk depends largely on the food of the cow and exposure to sunshine, so that the supplies to the Nestlé factories can be considered ideal. Further, as the milk during the process is only exposed for a limited period to a temperature sufficient to ensure destruction of pathogenic bacteria, the vitamin content is conserved.

Cows' milk is generally accepted as having a lower iron content than human milk. A small amount of Ferri et Ammonium Citrate sufficient to give 4 p.p.m. in the reconstituted food is now being added to both "Vi-Lactogen" and "Lactogen" to make up for any possible deficiency of iron in the cows' milk used. That this policy is justified can be proved by reference to an article, "Nutritional Anaemia in Infancy," which was published in the "Medical Journal of Australia," September 27th, 1941.

As many Infant Specialists consider that a greater margin of safety, especially for Vitamin D, is desirable than is possible with fresh milk, we are now, after careful research, incorporating the concentrate of Vitamins A and D in "Vi-Lactogen" and "Lactogen."

This concentrate is prepared under strictest scientific control and contains fifty times the number of D units present in the best quality of Cod-liver Oil.[‡]

The amount of concentrate added is equivalent to—

497 International Units Vitamin A. and

106 " " D.

in each ounce (147 calories) of "Vi-Lactogen."

This is equal to more than a $\frac{1}{2}$ teaspoonful of Emulsion and is additional to the natural Vitamins already present in the product.

An infant at 6½ months is given 5 ounces of "Vi-Lactogen" and thus receives 2485 International A Units and 530 International D Units of added Vitamins. Similarly at the same age, it would receive 5.4 ounces of "Lactogen," containing 2684 International A Units, and 572 International D Units of added Vitamins.

Each factory has its staff of specially trained farms' inspectors, whose duties include routine examination of cattle for disease, as well as ensuring that dairy premises, cow bails, utensils, etc., are in absolutely sanitary condition, and that each of the stringent Regulations of the Company concerning milk supply are strictly observed.

A recent development has been the appointment of qualified veterinarians to the Nestlé factories manufacturing infant foods.

All cans are washed and sterilised **with live steam in automatic machinery operated by Nestlé employees.**

All cows are milked in accordance with a time-table, so that the process of manufacture commences as soon as possible after milking. Most raw milk for city consumption is, on the other hand, 24 to 48 hours old before delivery to customers, and older still before it is consumed.

The raw cows' milk received at the Company's factories is submitted to very strict and searching tests in the Factory Laboratory, and unless it passes all of these, is not manufactured into "Vi-Lactogen" or "Lactogen."

^{*} Nestlé Research Laboratory.

[‡] Many observers have commented on the enormous variation in Vitamin content from sample to sample of Cod-liver Oil.

As cows' milk varies in composition even from day to day, the factory chemists rapidly analyse each batch and so balances its components by additional butter fat and milk sugar,[§] that the "Vi-Lactogen," when reconstituted by the addition of hot, boiled water, closely resembles human milk. "Lactogen" has a slightly higher protein and lower milk sugar content and is made by these methods.

During manufacture and after pasteurising, the milk is homogenised to break up the large fat globules, until they become even smaller than those of human milk.

The milk is spray dried by a special process, a patent for which is held by the Nestlé Company. So gentle is the drying action that the solubility after reconstitution with water compares favourably with fluid milk. The effect of the heated air used in drying is so slight that, to ensure proper pasteurisation of the milk, this operation must be separately performed prior to drying. In the process of spray drying a jet of milk meets a current of warm air and is at once dispersed into a fine mist. Water is immediately evaporated from the tiny droplets of milk, leaving behind particles of milk powder. These fall to the bottom of the drying chamber and are automatically removed. The process is, of course, continuous.

Finally the resulting powder is packed by automatic fillers into tins for the market — it is untouched by hand at any time.

Routine bacteriological examinations carried out on the contents of the tin as packed for the market indicate a low average colony count.

The manufacturing process has removed all danger of the presence of pathogenic organisms.

Every tin is stamped on the bottom with the date by which the contents should have been used, and by this means only fresh stock remains on the market. The Nestlé organisation thus arranges for the withdrawal of overdated stock and its replacement by freshly dried "Lactogen" or "Vi-Lactogen."

This expiry date does not imply that after that date the contents of the tin is no longer suitable for use; it prevents the sale of old stocks to the public.

The chief chemical and physical characteristics of "Vi-Lactogen," the humanised milk, are:—

1. "Vi-Lactogen" is pure, fresh milk modified ("humanised"), fortified by the addition of a Concentrate of A and D vitamins and iron, dried by a highly scientific process.
2. Uniform composition, closely corresponding to that of human milk.
3. Reduction in size of fat globules in process of manufacture. (The usual process employed in manufacturing dried milks tends to cause the fat globules to become much larger than those in cows' milk.)
4. "Vi-Lactogen" is under the strictest scientific control, from the time the milk is obtained from the cows until it is finally consumed by the infant.
5. "Vi-Lactogen" is entirely an Australian product, manufactured by the Nestlé Company in factories situated at Smithtown, North Coast of New South Wales, and Dennington, in the Western District of Victoria, and the milk supplies are drawn from some of the world's richest pastures.

[§] As milk-sugar has been known to contain foreign matter and also small quantities of a substance which may cause digestive disturbances all lactose used in the preparation of "Vi-Lactogen" and "Lactogen" is carefully tested before use.

WHEN STARTING BABY ON "VI-LACTOGEN"

The following article giving advice to mothers is in the pamphlet included in all tins of "Lactogen" and "Vi-Lactogen."

In the first few weeks of life, baby's digestion has to learn how to function.

A mother should not be over-anxious for a quick increase in weight — perfect digestion is essential first.

If breast milk fails the only alternative is a modified milk food, such as "Vi-Lactogen."

A mother should, if she can, partly feed the baby and only make up the deficiency with "Vi-Lactogen." When this is necessary for a very young baby, the change-over to the new food needs careful handling. The natural food is breast milk and tolerance for the new food has to be established.

Do not change suddenly to the quantities given on the "Vi-Lactogen" tin. These figures are correct for average babies, but only after they have adjusted themselves to the change from breast milk.

NOTE:

1. Never start using any infant food at full strength. Give the full amount of water for baby's age but only half the amount of powder shown in the feeding table.
2. Gradually increase the amount of powder up to the figures given. The normal baby can usually reach full strength in one or two weeks, but others may need longer.
 - It is important, however, to get to full strength without delay, as baby needs this amount of powder for its normal growth.
3. (a) Most babies will show normal progress but if there are signs that baby has difficulty in tolerating the full strength mixture try adding one tablespoonful more of water than the table shows.

Baby will sometimes digest a diluted mixture more readily, provided the volume is not too much to swallow.

 - (b) Another temporary alternative is to replace one teaspoonful of "Vi-Lactogen" powder by one teaspoonful of Lactose (milk sugar) until the full strength (without added sugar) can be tolerated.
4. If baby is not showing satisfactory progress ask the advice of your doctor, or telephone or write to the address of our Infant Welfare Room in the State in which you live. The address is given in this pamphlet.

WATER REQUIREMENTS: Do not cut down the amount of water when starting on the food or if baby appears upset. Cut down the powder temporarily but not the quantity of water. Babies need water. Give plenty of boiled water, especially during hot dry months.

"VI-LACTOGEN" FEEDING TABLE

"Vi-Lactogen" contains added Vitamins A and D and a small amount of organic Iron. Each 7 ozs. of mixed "Vi-Lactogen" contains the equivalent of half a teaspoonful of Emulsion.

Based on MEDICINAL Teaspoons and Tablespoons. Household spoons should not be used. Ask our nearest Office for free "Lactogen" Measure and copy of "The 'Lactogen' Mother Book."

PRESS POWDER FIRMLY IN MEASURE WITH KNIFE AND LEVEL OFF

FOR 3-HOURLY FEEDS 6 a.m. to 9.30 p.m. (6 feeds)					
AGE	"VI-LACTOGEN" Level Spoonfuls		WATER Spoonfuls	Makes Fluid Ounces	Cals. per feed
	Table	Tea			
At 1st Week	—	1½	2	1	17
3rd "	1	& 1	5½	3	56
5th "	1	& 2½	7½	4	73
7th "	1	& 3	8	4½	79
2½ Mths.	2	—	9	5	90
3½ "	2	& 1	10	5½	101
4½ "	2	& 2	11	6	112
Discontinue night feeding (after 10 p.m.) as soon as possible. Try 4-hourly feeding after 2nd month.					

Increase
quantities
slightly
each
week
avoiding
abrupt
changes.

FOR 4-HOURLY FEEDS 6 a.m. to 10 p.m. (5 feeds)					
AGE	"VI-LACTOGEN" Level Spoonfuls		WATER Spoonfuls	Makes Fluid Ounces	Cals. per feed
	Table	Tea			
At 1st Week	—	2	2½	1½	23
3rd "	1	& 1½	6¼	3½	62
5th "	2	—	9	5	90
7th "	2	& 1	10	5½	101
2½ Mths.	2	& 2	11	6	112
3½ "	2	& 3	12¼	6½	123
4½ "	3	—	13¼	7¼	135
5½ "	3	& ½	14	7½	141
6½ "	3	& 1	14½	8	147
7½ "	3	& 2	15½	8½	158
9 "	3	& 3	16½	9	170

IMPORTANT.—When commencing this food mix all the water with only half the amount of "Vi-Lactogen" for first feeds, then gradually increase the amount of "Vi-Lactogen" to amount shown.

MIXING.—Place powder on top of the hot (boiled) water and stir vigorously with a fork until completely dissolved.

Analysis of "Vi-Lactogen."

	POWDER	DILUTED
Fat	24.2	3.0
Protein	16.9	2.1
Lactose	53.1	6.6
Ash	3.6	.45
Added Vitamin A	64	International Units per ounce of mixed food.
Added Vitamin D	14	" " " " " " " "
Added Organic Iron	4	parts per million of Fe per ounce of mixed food.

Data of "Vi-Lactogen."

1 Medicinal Tablespoon = .31 oz. or 8.75 gm.
1 oz. Avoir. = 3¼ Medicinal Tablespoons.
1 Gram = 5.15 Calories.
1 Tablespoon = 45 Calories.

THE ADDITION OF COD-LIVER OIL EMULSION IS NOT NECESSARY.

TO GRADE FROM "VI-LACTOGEN" TO STANDARD "LACTOGEN."

The change-over from "Vi-Lactogen" to "Lactogen" is usually made at 5½ months, but if thought necessary it can be made either at an earlier or a later date, and the following simple rule is useful:—

Substitute 1 tablespoonful and ½ a teaspoonful of "Lactogen" for each tablespoonful of "Vi-Lactogen" at weekly intervals, until after the fourth week full strength "Lactogen" is being fed, and then use the "Lactogen" Feeding Table. This gradually increases the protein percentage from 2.1 in the "Vi-Lactogen," by 0.3 per cent. each week until the figure of 3.1 per cent. for full strength "Lactogen" is attained.

"LACTOGEN" FEEDING TABLE

"Lactogen" contains added Vitamins A and D and a small amount of organic Iron.

Based on MEDICINAL Teaspoons and Tablespoons. Household spoons should not be used. Ask our nearest Office for free "Lactogen" Measure and copy of "The 'Lactogen' Mother Book."

PRESS POWDER FIRMLY IN MEASURE WITH KNIFE AND LEVEL OFF.

FOR 3-HOURLY FEEDS 6 a.m. to 9.30 p.m. (6 feeds)					
AGE	"LACTOGEN" Level Spoonfuls		WATER Spoonfuls	Makes Fluid Ounces	Cals. per feed
	Table	Tea			
At 1st Week	—	1	2½	1¼	19
3rd "	1	& ½	5½	2¾	56
5th "	1	& 2	7	4	71
7th "	1	& 3	8	4½	81
2½ Mths.	2	—	9	5	90
3½ "	2	& 2	9½	5¼	103
4½ "	2	& 3	10	5½	113
Discontinue night feeding (after 10 p.m.) as soon as possible.					
Try 4-hourly feeding after 2nd month.					

Avoid
abrupt
changes.
Each
week
make
gradual
increases.

FOR 4-HOURLY FEEDS 6 a.m. to 10 p.m. (5 feeds)					
AGE	"LACTOGEN" Level Spoonfuls		WATER Spoonfuls	Makes Fluid Ounces	Cals. per feed
	Table	Tea			
At 1st Week	—	1¼	3	1½	22
3rd "	1	& 1	6½	3½	61
5th "	2	—	9	5	90
7th "	2	& 1	10	5½	96
2½ Mths.	2	& 2	10½	5¾	111
3½ "	3	—	11	6	123
4½ "	3	& 1	12	6¾	133
5½ "	3	& 2	13	7¼	144
6½ "	3	& 3	14	7¾	154
7½ "	4	—	15	8¼	164
9 "	4	& 1	16	9	174

IMPORTANT.—When commencing this food mix all the water with only half the amount of "Lactogen" for first feeds, then gradually increase the amount of "Lactogen" to amount shown.

1 Teaspoonful of Lactose (milk sugar) to be added to each feed for first 10 weeks. This is included in calculation of Calories per feed.
MIXING.—Place powder on top of the hot (boiled) water and stir vigorously with a fork until completely dissolved.

Analysis of "Lactogen."

	POWDER	DILUTED
Fat	24.5	3.2
Protein	23.7	3.1
Lactose	43.6	5.7
Ash	5.2	.67

Added Vitamin A 70 International Units per ounce of mixed food.
Added Vitamin D 15 " " " " " "
Added Organic Iron 4 parts per million of Fe per ounce of mixed food.

Data of "Lactogen."

1 Medicinal Tablespoon = .29 oz. or 8.1 gm.
1 oz. Avair. = 3½ Tablespoons.
1 Gram = 5.05 Calories.
1 Tablespoon = 41 Calories.

WHY WE MAKE TWO INFANT FOODS.

Cows' milk unmodified is not suitable for infants because of its high protein and low sugar. In "Vi-Lactogen" the protein and milk sugar are modified close to breast milk composition. "Lactogen" is modified to intermediate figures. We believe that, for the very young babies, "Vi-Lactogen" is the food to recommend, but if higher protein is indicated, or the baby is weaned at 5 to 6 months, or later, then "Lactogen" should be used and continued during the early years of baby's life. Cod liver oil is not essential, as both foods, in addition to the Vitamins naturally present in the milk from which they are made, **now contain added Vitamins A and D**, and sufficient added Organic Iron to give the average amount present in human milk.

COMPARE THESE STATEMENTS.

"Lactogen" and "Vi-Lactogen."

Uniform in composition.

The process lowers the curd tension and causes it to form with proteolytic ferments a fine flocculent curd. Protein is proportionately lower than in cows' milk. In "Vi-Lactogen" it is only 2.1 per cent.

Lactose is added, so that "Vi-Lactogen" approximates human milk in composition in this respect.

"Lactogen" contains slightly less lactose.

Pathogenic organisms killed in process of manufacture.

Bacterial counts on dilution are very low (Nestlé Research Laboratory).

Bacterial counts tend to decrease after manufacture.

Fat globules as small as in human milk.

Remains sweet and pure. Only sufficient is mixed for each feed.

Little danger of contamination from outside sources.

Manufactured from milk within a few hours of milking.

† (Pritchard; Physiological Feeding of Infants, page 179.)

"Vi-Lactogen."

The fat present is similar to that of human milk, and is therefore easily digested. Addition of a vitamin concentrate ensures ample Vitamin A and D content and avoids the need for a large excess of a foreign fat.

"Vi-Lactogen" is uniform in composition and very similar to average for human milk.

"Vi-Lactogen" is simple in use, as it only requires mixing with hot (boiled) water. Place the powder on top of the water and stir vigorously with a fork.

Cost of feeding on "Vi-Lactogen" is low.

"Vi-Lactogen" is exposed to a shorter heating period during manufacture than in boiling milk under normal household conditions.

Raw Milk.

Butter fat figure in particular is not constant. According to Droop Richmond, variations are—minimum 1.04 per cent., maximum 12.52 per cent.

With rennet it forms a hard clot, which is very indigestible, due to greater amount of casein in cows' milk compared to human milk in which albumin predominates.

Has 4.7 per cent. Lactose, while human milk contains an average of 6.6 per cent.

Many epidemics have been traced to raw milk supplies. Bovine type of tubercle bacillus can cause tuberculosis in children.

Public Health reports on milk supplies of cities mention colony counts generally in millions.

Bacterial counts increase with enormous rapidity. "... Milk with an initial content of 30,000 per c.c. held at 68° Fahr. may possess 4,000,000 bacteria per c.c. at the end of 24 hours, or 25,000,000,000 at the end of 48 hours."†

Fat globules much larger than in human milk, and therefore less easy to digest by an infant.

Sours easily, unless held in cold storage.

Easily contaminated by flies, dust, dirty jugs, etc.

City milk is frequently 24 to 48 hours old when delivered.

Modified Cows' Milk.

Complete modification requires far more Cod-liver Oil than is necessary to supply vitamins. This excess is liable to upset the infant.

The final analysis of modified milk depends upon the unknown composition of the milk used.

Modified milk requires very careful measurement of milk, Cod-Liver Oil Emulsion, Lactose and of water. This involved method adds to the uncertainty of the composition of the mixture.

Cost is generally higher due to the extras required, even if a low-priced milk is used.

Milk is generally boiled for safety and frequently heated more than once.

**COMPARATIVE TESTS
LACTOGEN and COWS' MILK**

VI-LACTOGEN under same test
shows similar comparison.

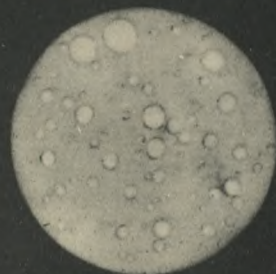
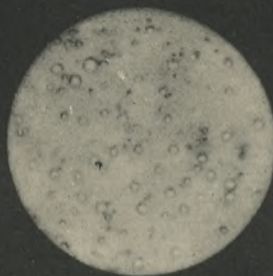
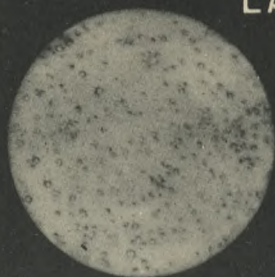
PHOTO-MICROGRAPHS
OF THE FAT GLOBULES.

In LACTOGEN, the large fat globules of
the cows' milk are reduced to a size even
smaller than those of maternal milk.

LACTOGEN

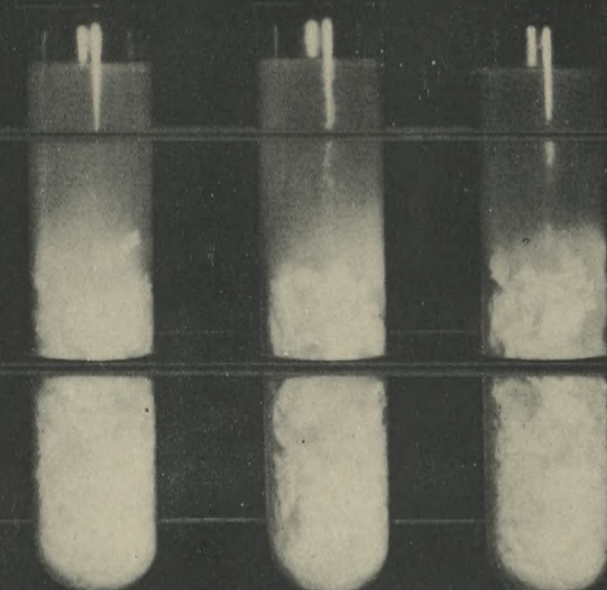
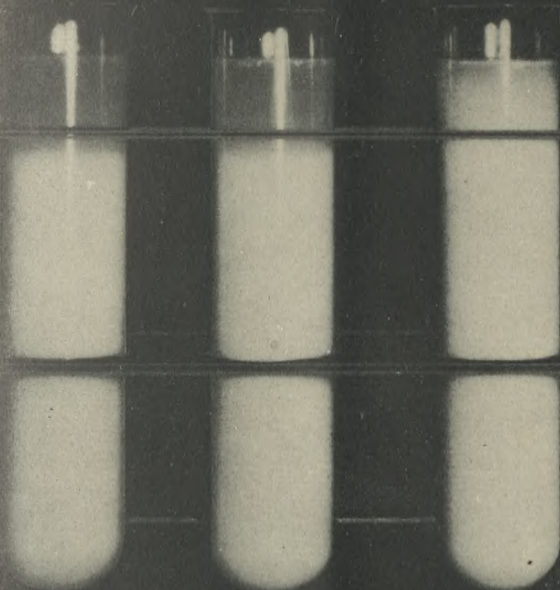
HUMAN MILK

COWS' MILK



LACTOGEN

COWS' MILK

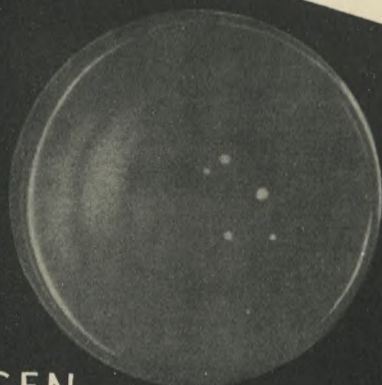


CURDS FORMED DURING DIGESTION

With LACTOGEN, the large solid clot of cows' milk
is replaced by a finely divided curd resembling that
of human milk.



COWS' MILK



LACTOGEN

BACTERIAL PURITY

COWS' MILK

1/1,000 c.c. plated—over
200,000 bacteria per c.c.

LACTOGEN

1/100 c.c. plated — less
than 1,000 bacteria per c.c.

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"LACTOGEN" FOR THE NURSING MOTHER.

It is undoubted that "Lactogen" has the effect of improving the flow of breast milk in many cases. Attention has been drawn to this fact by doctors closely associated with maternity hospitals, who have tested "Lactogen" in the diet of mothers and expectant mothers.

It is not suggested that "Lactogen" acts as a direct stimulant to the mammary gland. The explanation of its value lies in the fact that it is the simplest way in which an incorrect or inadequate diet can be improved, i.e., by giving to the mother the proper components of human milk in a well-balanced and easily digestible form.

It is the experience of the majority of physicians that many mothers have little or no idea of the correct diet necessary to obtain the best results when breast feeding an infant.

"Lactogen" can be diluted to any desired strength and can be made up so that the prepared food contains considerably more solids than cows' milk, thus avoiding the discomfort caused when the latter is fed in the large quantities necessary to give equivalent nourishment.

In the maternity hospitals referred to above, "Lactogen" is also being used in a variety of ways, such as in the preparation of custards, milk puddings, and other appetising dishes, where its agreeable flavour and ease of assimilation produce the same satisfactory results.

* * * * *

FREE ANALYSES OF HUMAN MILK.

When breast-fed infants are not progressing there is always the possibility that the milk supply is abnormal in composition. Realising the difficulties of obtaining an analysis, we have opened a section of our Laboratory for the analysis of human milk. This service is free to Physicians. We strongly advise taking a sample from the complete contents of the breast if results of value are to be obtained, especially in regard to fat, as the percentage of this constituent increases as the gland empties. If it is difficult to obtain such a sample, we recommend a composite mixture of equal quantities taken at the beginning, middle and end of suckling.

A quantity of 1 oz. is all that is required for a complete analysis. This bulk sample should be thoroughly mixed before filling the sample bottle, and we suggest adding one drop of forty per cent. formalin to this quantity as a preservative.

At your request we will be pleased to forward bottles for sampling which will already contain the required amount of formalin. When a complete analysis is not specifically asked for, we will determine the fat percentage and total solids only. Always record your name and address or telephone number to avoid delay in advising you of results.

A complete record of all the analyses made can be seen at our Research Laboratory at any time.

* * * * *

The following interesting figures have been obtained each year from numerous analyses of samples of human milk since the special section of the Nestlé Research Laboratory has been opened:—

	Average 1926-40	Average 1941	Average 1942	Average 1943	Average 1944	Average 1945	Average 1946	Average 1947	Maximum	Minimum
Fat	4.39	4.31	4.13	4.10	3.8	3.74	3.85	3.80	12.75	.21
Lactose	6.84	6.79	6.96	6.82	6.68	6.97	7.03	6.96	9.72	1.01
Protein	1.35	1.35	1.35	1.37	1.51	1.26	1.25	1.26	6.71	.44
Ash .....	.22	.24	.22	.22	.24	.22	.24	.22	.50	.11

SPECIAL RECIPES.

"Lactogen" Milk Puddings.—In making the usual cereal puddings, such as cornflour, sago, tapioca, semolina, ground rice, etc., "Lactogen" can be used with advantage to replace ordinary milk. As a general rule, prepare the "Lactogen" in the following strength: Three level household tablespoons to one cup of boiling water.

Malt Soup.— $1\frac{1}{2}$ tablespoons Maltogen, 1 tablespoon of flour, $4\frac{1}{2}$ tablespoons "Lactogen," 15 ounces water.

Mix the Maltogen, flour and "Lactogen" together. Add sufficient water to make a smooth paste; then add remainder of water and stir. Place in a double boiler and boil for 5 to 10 minutes.

Mutton Broth.—Cover a shank with water; add 1 tablespoon of barley and a pinch of salt. Boil about four hours till meat comes easily from the bone. Strain and set. When cold, remove all fat and warm up. This broth is best made the day before using.

Pritchard's Vegetable and Bone Soup.—Take 1 lb. of shin of veal or bone of some other young animal (chicken, lamb, etc.). Chop up so as to expose marrow and simmer gently for about eight hours with $1\frac{1}{2}$ pints of water and 1 tablespoon of malt vinegar, but no salt. Add about $\frac{1}{4}$ lb. of mixed vegetables and again simmer for one hour. Strain, make up to 1 pint, and allow to set into jelly.

(Dr. Eric Pritchard, referring to the uses of this soup in his work, "The Physiological Feeding of Infants and Children," states:—"It can be given to babies of any age . . . For ordinary healthy infants I generally order 2 to 4 ounces to be given in the 24 hours.")

Rice, Barley or Oatmeal Jelly.—Two level tablespoons of rice flour or patent barley (in the case of oatmeal jelly, $1\frac{1}{2}$ level tablespoons of oatmeal), 10 ounces of water, pinch of salt.

Mix the rice flour, patent barley or oatmeal with 1 ounce of cold water and add 9 ounces of boiling water. Stir two minutes and place in double boiler. Boil for one to two hours. Strain and keep covered in a cool place.

"Lactogen" Gruel.—Take one teaspoon of oatmeal and sprinkle into a cup of water, and boil 20 minutes to half an hour. (If for a baby under 9 months this must be strained.) Add prepared "Lactogen" to suit taste.

Baked Custard.—One egg, half a pint of prepared "Lactogen," sugar to taste. Beat up the egg, add the "Lactogen," stirring well, pour into a buttered pie dish and bake in a slow oven. A few drops of vanilla or essence of lemon may be added.

Ground Rice Custard.—Ground rice, one egg, half a pint of prepared "Lactogen." Mix one large teaspoonful of ground rice with the "Lactogen." Beat up the egg, and add this to the mixture with a little sugar. Bake in a pie dish in a slow oven.

**SUGGESTIONS FOR THE USE OF VARIOUS FOODS WITH OR WITHOUT
"LACTOGEN," FROM BIRTH TO TWELVE MONTHS, IN THE DIET
OF THE AVERAGE INFANT.**

FOOD	AGE	QUANTITY	REMARKS
"VI-LACTOGEN"	All Ages	See feeding table (page xxxviii).	When modification is practised by the addition of cod-liver oil or extra lactose "Vi-Lactogen" is indicated as simpler and more satisfactory, as only the addition of water is necessary.
"LACTOGEN"	All Ages	See feeding table (page xxxix).	"Lactogen" is a safe basic milk diet during all stages of a child's development.
MALTOGEN	All Ages	Add to "Lactogen" or "Vi-Lactogen" $\frac{1}{4}$ to 1 teaspoonful per feed (see table, page I), or replace one teaspoonful of the "Lactogen" or "Vi-Lactogen" powder by one teaspoonful of Maltogen.	Maltogen contains all the sugars formed from starch. Therefore, useful in educating the digestive functions of an infant for starch. Of value also as a corrective for constipation and in malnutrition. Contains added Vitamin B ₁ .
ORANGE JUICE	1 Month	Begin with a few drops, increasing to a half teaspoonful two or three times per day. Can be added direct to bottle or given midway between feeds. Increase to 6-8 teaspoonfuls daily at 6 months.	Dilute with twice the amount of cool boiled water. Given to supply excess of anti-scorbutic vitamin. $\frac{1}{2}$ teaspoonful in 3 to 4 tablespoons of warm, boiled water one hour before feeding tends to prevent constipation. Prepare juice just before using.
RICE JELLY BARLEY " OATMEAL "	6-7 Months	Added to bottle, beginning with very small quantities, or given separately later.	It is usually advisable to start with barley or rice jelly, as they do not have the same irritating effect as the oatmeal jelly.
HOME-MADE RUSKS	6-7 Months	Very small quantity just before or after "Lactogen" feed.	The period to begin depends on the development of the teeth.
JUICE OF RAW BEEF MUTTON BROTH VEGETABLE "	6-7 Months	Begin with only a very small quantity, increasing to $\frac{1}{2}$ to 1 oz. daily.	Small quantities can be given earlier. BAKED BREAD CRUMBS can be added to the broth.
VEGETABLES	6-7 Months	Begin with small quantity added to the broth, and at 8-9 months two tablespoonfuls given separately.	Well mashed and strained peas, beans, pumpkin, marrow, cauliflower, spinach, carrots.
EGG YOLK, RAW	6-7 Months	Commence with $\frac{1}{4}$ teaspoonful added to the milk mixture.	Gradually increase to 2 teaspoonfuls.
DRY CRUSTS OF BREAD	9 Months	Only very small quantity is actually eaten.	Give usually just before "Lactogen" bottle; may be slightly buttered. Do not leave baby alone with crust.
COCOA	10 Months	Weak.	Made with "Lactogen."
"LACTOGEN" CEREAL PUDDINGS	10 Months	Two ounces, 1 meal per day.	Very small quantities can be given as early as the 7th or 8th month to inculcate starch digestion.
APPLE PULP PRUNE PULP	10 Months	One teaspoon.	Gradually increase quantity to 1 to 2 table- spoons.
FIRM RIPE APPLE	12 Months	Begin with small quantity.	Begin by scraping off with a spoon.
STALE BROWN BREAD AND TOAST	12 Months	Begin with small quantity.	Lightly spread with butter, dripping, seedless jam, honey or treacle.

The "Lactogen" and "Vi-Lactogen" Mother Book which we give to mothers contains additional suggestions.

N.B.—Mothers are apt to overfeed when commencing with starchy foods. It cannot be over-emphasized that only very small amounts of supplementary foods should be added, except towards the end of the first year.

MILO.

A Fortified Tonic Food.

Percentage Composition:*

Fat	Protein	Carbohydrate	Mineral Salts	Moisture	Wt. Oz. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
9.6	13.8	68.5	5.1	3.0	.26	31.4

Milo—Fortified Tonic Food—prepared by the Nestlé Company, is the outcome of prolonged research and investigations. The composition was determined from the results of numerous biological trials and, moreover, was approved by several distinguished dietitians before being finally adopted.

Milo is a concentrated tonic food prepared from Milk and Malted Cereals, fortified by the addition of Vitamin concentrates, organic Phosphates and important mineral salts—including Calcium, Magnesium, Iron, Sodium.

It is now generally accepted that many modern diets are seriously deficient in certain minerals and that such deficiencies are not only conducive to faulty metabolism but may even, in some instances, ultimately lead to specific disease. Milo is, therefore, enriched with balanced amounts of those mineral constituents which are so essential to the human organism — especially as regards the nervous system.

These elements are added in those particular combinations which can be readily utilised; for example, iron is furnished as the easily assimilated albuminate, whilst an adequate phosphorus allowance is provided in the form of glycerophosphates—which can be rapidly absorbed.

The addition to Milo of magnesium is of particular clinical interest, as it is now known that this element is a constituent of all living cells. Professor Delbet of Paris has submitted evidence of his contention that certain pathological conditions are attributable to magnesium deficiency which he considers arises from a gradual decrease in the amount provided by ordinary foodstuffs.

The nerve cells in particular call for appreciable amounts of magnesium, so that Milo—on account of its richness in magnesium—is a definite fortifier of the nervous system.

Milo also furnishes a generous vitamin allowance; not only are the vitamins of the original grain and milk carefully retained, but the incorporation of cereal germ, a rich, natural source of B₁, and also of yeast, provide additional quantities of the B factors. Moreover, the product is supplemented by the addition of fish liver oil concentrates which supply Vitamins A and D in natural ratio, without impairing the taste, odour or digestibility of the Food.

Milo, when packed, contains not less than the following amounts of Vitamins and minerals:—

Vitamin A	..	..	..	500	International Units per ounce
Vitamin B ₁	..	..	..	50	" " " "
Vitamin D	..	..	..	100	" " " "
Calcium as Ca O	..	..	..	0.65	per cent.
Magnesium as Mg O	..	..	..	0.26	" "
Iron as Fe ₂ O ₃	..	..	..	0.02	" "
Phosphorus as P ₂ O ₅	..	..	..	1.30	" "

* Nestlé Research Laboratory.

Indications for Use.

Nervous Disorders. Milo has been specially designed as an anti-neuritic tonic food, and is invaluable in cases of neurasthenia, nervous debility and insomnia. Its B₁ content is of special interest.

Pregnancy. Milo is of particular value during pregnancy, as — apart from its general nutritive properties — it increases the calcium-phosphorus intake, and thus avoids depletion of the maternal skeleton, due to the foetal demand.

Nursing Mothers. As Milo is a complete food, it offers the supplementary nourishment required during this period; in addition the mineral and vitamin contents are of value—not only in maintaining the general health of the mother — but also in protecting against possible deficiencies in the infant.

Senility. Milo can be included with advantage in the dietary of the aged; it is easily digested and contains an ample supply of magnesium, an element frequently indicated owing to disturbances in the calcium-magnesium balance caused by advancing age.

Convalescents, Post-operative Cases, etc. In all cases where an easily digested tonic food is indicated, Milo may be prescribed with every confidence.

Milo has excellent keeping qualities and is extremely convenient in use; it is taken in either hot or cold milk as desired. A simple way to include Milo in the diet is to recommend its use in place of cane sugar on cereals and puddings.

STERILISED CREAM.

Percentage Composition:*

Water	Fat	Solids— not fat	Cane Sugar	Wt. ozs. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
67.0	25.5	7.5	.....	.50	38.0

Sterilised Cream is manufactured in a similar way to Ideal Milk except that concentration is not required. Although absolutely free from preservative, Nestlé's Sterilised Cream will keep indefinitely in the unopened state.

Cream, on account of its high percentage of butter fat, is rich in Vitamins A and D, and according to authorities the method of manufacture we use does not appreciably affect these Vitamins.

NESTLÉ'S AND GOLD MEDAL CONDENSED MILKS.

Percentage Composition:*

Water	Fat	Protein	Lactose	Ash	Cane Sugar	Wt. ozs. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
25.5	9.2	9.0	11.8	2.0	42.5	.67	65.5

In the manufacture of high-grade condensed milk the quality of the fresh milk used is of the utmost importance. We apply to all our products the same strict control throughout as outlined in the notes we have given on the manufacture of "Vi-Lactogen."

In the process of manufacture of condensed milk the fresh milk is pasteurised and then drawn by suction into large vacuum pans with a holding capacity of many tons of condensed milk. Sterilised sugar solution is drawn into the pan during evaporation of the milk.

* Nestlé Research Laboratory.

By reducing the pressure with vacuum pumps rapid ebullition in the milk at low temperatures results and concentration takes place until the original 87 per cent. of water in the fresh milk is reduced to 25.5 per cent. The vacuum is broken, and the condensed milk flows by gravity to the cooling tanks, and finally to the filling and packing machines.

The low temperature of evaporation and the absence of oxygen are, no doubt, responsible for the fact that in high-grade condensed milks the Vitamins **A**, **B**, and **C**, also **D** and **E** are practically unaffected.

As the condensed milk has never reached temperatures higher than pasteurisation, it is not an absolutely sterile article in the strict sense of the word, **but it is free from pathogenic organisms**. Owing to the quality of the fresh milk used, and the scrupulous hygiene of our factories, our Research Laboratories frequently record colony counts of less than 17 organisms per gramme.

This figure is the more striking when compared with Public Health reports on city milk supplies.

Nestlé's Condensed Milk has long been recognised as an extremely useful food for premature infants; also children suffering from gastric disturbances show a marked tolerance for it when other foods have failed. Its freedom from pathogenic organisms makes it a safe food during hot weather.

A recommended method for premature infants when breast milk is not available is to begin by using 1 part of condensed milk by volume with 11 parts of boiled water. For example, one half medicinal tablespoonful of condensed milk (2 teaspoonfuls) plus 5½ medicinal tablespoonfuls of water gives 6 tablespoonfuls of mixture or 3 fluid ounces—caloric value approximately 11 per ounce.

Then gradually increase strength to 1 part of condensed milk by volume with 7 parts of boiled water. For example, one medicinal tablespoonful of condensed milk plus 7 medicinal tablespoonfuls of water gives 8 tablespoonfuls of mixture or 4 fluid ounces—caloric value approximately 16 per ounce.

The composition of this full strength mixture is approximately 1.5% protein, 1.48% fat, 8.7% carbo-hydrate (2.2% lactose, 6.5% cane sugar).

The total water intake required daily for prematures is about 3 ounces per pound body weight. An adequate intake of water is important.

When used as the sole diet of an infant care should be taken to see that the Vitamin A and D intake is adequate as the fat percentage is comparatively low, with a consequent decrease in Vitamins **A** and **D**.

Directions for Preparing Nestlé's and Gold Medal Condensed Milk for Infants:

Age	Condensed Milk Medicinal Spoons Table	Tea	Boiled Water Medicinal Table- spoons	Calories per Feed	Remarks.
At 1st week	—	1	2	16	This table is based on 1 part of Condensed Milk to 7 parts of water, for six 3-hourly feeds at 6 a.m., 9 a.m., 12 noon, 3 p.m., 6 p.m., and 9 p.m. For 4-hourly feeds add one-fifth the amount of Condensed Milk and water to each feed. To use household tea and tablespoons, take two-thirds of the medicinal measurements. It is best to use medicinal measures, as household spoons vary in size.
" 2nd "	—	2	4	33	
" 3rd "	—	3	6	49	
" 4th "	1	—	7	65	
" 6th "	1	1	9	81	
" 2½ months	1	2	10½	98	
" 4½ "	1	3	12½	114	
" 6 "	2	—	14	131	

General Conclusions.

Contained in a report by the Laboratories of the Royal Institute of Public Health, London.*

1. The milk used in the preparation of Nestlé's Full Cream Condensed Milk is obtained under the most satisfactory conditions of supervision.
2. The processes of manufacture are carried out under the best hygienic conditions.
3. The chemical results show the condensed milk to be of good quality.
4. The bacteriological results show that the processes adopted are effective in the reduction and destruction of bacteria.
5. No evidence was obtained of the presence of the tubercle bacillus.
6. Evidence of the preservation of the vitamin contents was confirmed.

IDEAL MILK—(UNSWEETENED).

Percentage Composition:§

Water	Fat	Protein	Lactose	Ash	Cane Sugar	Wt. ozs. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
§§ 71.8	8.2	7.9	10.4	1.7	....	.54	23.2
**	3.8	3.7	4.9	.7	....	....	10.3

In the manufacture of Ideal Milk, laboratory methods of sterilisation under pressure are adapted to industrial conditions. Great care and scientific control are necessary both in the preparation and sterilisation of the milk.

Without any addition, the milk is concentrated to a definite analysis in the vacuum pan and homogenised to split up the butter fat globules and effect satisfactory emulsification when diluted. It is then filled into tins and hermetically sealed. The filled tins are placed in large autoclaves and subjected to sterilising temperatures for a period of about a quarter of an hour. By this means every organism in the milk is killed; therefore, the product will keep indefinitely while sealed. After opening, as no preservative is present, the milk will sour in the same way as fresh milk, and in warm weather it should be kept on ice if not used immediately.

Ideal Milk when diluted provides a useful substitute for fresh milk for all general purposes. Of all forms of cows' milk, unsweetened milk is perhaps the least allergic. In practically every case of true milk allergy, unsweetened milk is well tolerated. ("J. Pediat.," May, 1940).

NESTLÉ'S MALTED MILK.

Vitamin "B₁" is now added to Nestlé's Malted Milk.

Percentage Composition:§

Water	Fat	Protein	Lactose	Ash	Cane Sugar	Malt Sugars	Starch	Vitamin B ₁ Int. Units per oz.	Wt. oz. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
† 2.2	8.3	12.5	12.5	3.0	....	61.5	....	150	.34	41.5
† .....	.8	1.2	1.2	.29	....	5.9	....	14	....	6.0

Nestlé's Malted Milk is made by drying a combination of whole milk with an extract of malted

* This report deals with investigations and conditions obtaining at one of our English Condenseries, but the methods of condensing and care exercised there apply equally to all factories controlled by the Company throughout the world.

§ Nestlé Research Laboratory. Owing to restrictions Ideal Milk is not now available to the general public. Supplies, however, can be obtained when considered essential on production of a certificate signed by a member of the Medical Profession.

§§ Concentrated. ** Diluted, 1 fluid oz. to 1½ water.

† Dry. ‡ Diluted, 1½ Med. Tablespoons to 4 oz. water.

barley and wheat flour, the ratio of malt solids to milk solids being 2 to 1, the whole of the starch being completely converted by diastatic action into soluble malt carbohydrates.

The final process is an interesting one, as the whole of the desiccation to powder takes place under vacuum.

While we do not recommend Nestlé's Malted Milk for routine infant feeding, nevertheless it is useful in special cases, as generally speaking tolerance for maltose is greater than for either lactose or cane sugar. The following feeding table has been found useful.

Based on level, not heaped, medicinal tablespoons.

(1 Tablespoon = 4 Medicinal Teaspoons Malted Milk
 „ = $\frac{1}{2}$ fluid ounce of water).

Age	Malted Milk Med. Tablespoon	Water Med. Tablespoon
1st month	$\frac{1}{4}$ to $\frac{3}{4}$	3 to 5
2nd „	1 $\frac{1}{4}$	7
3rd „	2	9
4th „	2 $\frac{1}{2}$	12
5th „	3	15
6th „	3 $\frac{1}{2}$	16

The table is based on three-hourly feeding intervals allowing for one night feed during first month.

Times of feeding recommended:—6 a.m., 9 a.m., Noon, 3 p.m., 6.30 p.m., 9.30 p.m.

After 6 months, the quantities given should be increased gradually in the proportion of 1 tablespoon of Malted Milk to 4 tablespoons of water, i.e., if giving 5 tablespoons of Malted Milk, 20 tablespoons of water would be required.

Nestlé's Malted Milk is of value when low fat and protein, together with replacement of cane sugar, becomes necessary, and further, owing to the method of preparation, the vitamins of the milk and cereals are retained. When used for a prolonged period for infant feeding the supplementing of accessory food factors A and D is desirable, especially as the milk constituents are comparatively low when the product is diluted for use.

In recent years a great deal of scientific work has been carried out on the physiological effects of vitamins on human health and nutrition, which may be summarised as follows:—

Shortage of Vitamin B₁.—A shortage of Vitamin B₁, known as the anti-neuritic, growth-promoting vitamin, has been proved to cause very serious disorders. While extreme shortage which causes beri-beri and associated diseases is rarely encountered in this country, there is no doubt that modern diet and the refining of cereals can result in a lowering of the B₁ intake to dangerous levels. This has brought about in many individuals a condition of chronic deficiency.

The indigent, and those who, from idiosyncrasy eat poorly balanced diets, and food faddists, frequently seriously reduce Vitamin B₁ intake. Patients suffering from organic disease often have little appetite, or dietary restriction may limit intake, while gastro-intestinal disturbances can also impair absorption.

Finally, the B₁ requirement is greatly increased by augmented metabolic processes in febrile conditions, hyper-thyroidism, intense muscular exertion and during pregnancy and lactation.

Scientific Opinions—Well-known scientists claim that many disorders of modern life, loss of appetite, constipation, nervous and alimentary diseases can be traced to a border-line intake of Vitamin B₁. These are dietetic troubles which do not necessarily incapacitate, but which lower the general tone and cause mental and physical fatigue. Many go further and state that shortage of Vitamin B₁ is the most serious feature of present-day diet.

Adequate Intake Essential.—Vitamin B₁ cannot be stored for any length of time in the body. There is no appreciable reserve to be drawn on and, therefore, it is essential that the daily intake be adequate.

Modern refining of flour removes the germ of wheat because of its ill effect on the keeping quality and colour of the flour, also statistics have proven that much less flour is eaten now than formerly. Previously the body could rely on the wheat germ in flour for a reasonable B₁ intake, but it must now obtain the necessary B₁ units from other sources.

Nestlé's Malted Milk is now fortified with Vitamin B₁.—Nestlé's Malted Milk, which has always been prepared from barley malt and other cereals containing the valuable germ, has now been fortified with additional Vitamin B₁ from the richest natural sources. This means that other associated vitamins are also added; i.e., A, B₂ and E, and valuable organic phosphates of Calcium and Magnesium.

Nestlé's Malted Milk has been found particularly useful in invalid diet, in typhoid, pneumonia, and post-operative cases, where easy digestion and rapid assimilation are essential.

Nestlé's Malted Milk is not only a nourishing food drink, but, as the result of this new development, has definite tonic and invigorating properties due to this increase in its Vitamin B potency.

MALTOGEN.

Malt Sugars with Vitamin B₁ for Infants and Adults.

Percentage Composition:*

Water	Fat	Protein	Lactose	Ash	Cane Sugar	Malt Sugars	Vitamin B ₁ Int. Units per oz.	Wt. oz. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
3.0	5.6	.....	1.4	.....	90.0	140	.33	36.9

Maltogen is a dried extract prepared by the enzymic action of malt diastase on barley malt and other cereals. Not only are the natural vitamins and mineral salts retained, but these are fortified still further by cereal germ extract, rich in Vitamin B.

Maltogen contains 90 per cent. of maltose and malto-dextrins, carbohydrates which are formed in the natural process of digestion of starch.

These sugars are especially valuable in the modification of milk or "Lactogen" for infant feeding. Maltogen is ideal for premature, weak and under-nourished babies.

Maltogen is also useful where a high or mixed carbohydrate diet is indicated, as malt sugars are less liable to fermentation or to cause the development of acidosis. They are readily absorbed and better tolerated than other sugars.

* Nestlé Research Laboratory.

Maltogen corrects constipation. It improves appetite and growth owing to its richness in Vitamin B₁ (the anti-neuritic Vitamin). Many infants and children show remarkable improvement when foods rich in Vitamin B are added to the diet.

Maltogen is valuable not only for modification of infant diets, but as a supplementary sugar for young children, nursing mothers, and adults on limited diets. A simple way to include Maltogen in the diet is to use it on cereals and puddings in place of cane sugar.

The following table will prove of use in prescribing the addition of this food to "Lactogen" or milk:

MALTOGEN	Diluted "LACTOGEN"	Increase in Carbohydrate
	2 fluid oz.	3.5%
	3 "	2.3%
	4 "	1.8%
	5 "	1.4%
	6 "	1.1%
	7 "	.9%
	8 "	.8%
	10 "	.7%
1 medicinal tea-spoonful dissolved in diluted "Lactogen," as shown in next column.		

SUNSHINE FULL CREAM POWDERED MILK.

Percentage Composition:*

Water	Fat	Protein	Lactose	Ash	Wt. oz. 1 Med. Tablespoon	Calories in 1 Med. Tablespoon
2.5	26.3	28.0	38.0	5.2	.28	.41

Sunshine Full Cream Powdered Milk is simply fluid milk from which, after pasteurising, the water has been removed by the most modern method of spray drying.

It is readily soluble and when mixed in correct proportions with water reconstitutes into a milk of excellent flavour.

3½ medicinal tablespoonfuls pressed and level equal 1-oz. of Powder. 3-ozs. mixed with 18½ fluid ozs. of water make a pint of normal milk containing 3.5% of butterfat.

There is no safer or better milk supply for young growing children, and for all household requirements.

NESTLÉ'S MILK CHOCOLATE.

Nestlé's Milk Chocolate supplies, in a concentrated form, the solid constituents of full-cream milk, finely ground cocoa bean and sugar, and is thus a most valuable supplement to the diet in those cases where extra nourishment is required. It is prepared in Australia under strict hygienic methods.

NESTLÉ'S COCOA.

Apart from its general usefulness as a nourishing beverage, when indicated in the diet of invalids and children, Nestlé's Cocoa can be confidently recommended by the Medical Profession on account of its excellent solubility and purity.

It is manufactured in Australia under strictest hygienic conditions.

* Nestlé Research Laboratory.

CALENDAR, 1948

JANUARY.	FEBRUARY.	MARCH.	APRIL.
S ... 4 11 18 25 M ... 5 12 19 26 Tu ... 6 13 20 27 W ... 7 14 21 28 Th ... 1 8 15 22 29 F ... 2 9 16 23 30 S ... 3 10 17 24 31	S ... 1 8 15 22 29 M ... 2 9 16 23 ... Tu ... 3 10 17 24 ... W ... 4 11 18 25 ... Th ... 5 12 19 26 ... F ... 6 13 20 27 ... S ... 7 14 21 28 ...	S ... 7 14 21 28 M ... 1 8 15 22 29 Tu ... 2 9 16 23 30 W ... 3 10 17 24 31 Th ... 4 11 18 25 ... F ... 5 12 19 26 ... S ... 6 13 20 27 ...	S ... 4 11 18 25 M ... 5 12 19 26 Tu ... 6 13 20 27 W ... 7 14 21 28 Th ... 1 8 15 22 29 F ... 2 9 16 23 30 S ... 3 10 17 24 ...
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S ... 5 12 19 26 M ... 6 13 20 27 Tu ... 7 14 21 28 W ... 1 8 15 22 29 Th ... 2 9 16 23 30 F ... 3 10 17 24 ... S ... 4 11 18 25 ...	S ... 3 10 17 24 31 M ... 4 11 18 25 ... Tu ... 5 12 19 26 ... W ... 6 13 20 27 ... Th ... 7 14 21 28 ... F ... 1 8 15 22 29 ... S ... 2 9 16 23 30 ...	S ... 7 14 21 28 M ... 1 8 15 22 29 Tu ... 2 9 16 23 30 W ... 3 10 17 24 ... Th ... 4 11 18 25 ... F ... 5 12 19 26 ... S ... 6 13 20 27 ...	S ... 5 12 19 26 M ... 6 13 20 27 Tu ... 7 14 21 28 W ... 1 8 15 22 29 Th ... 2 9 16 23 30 F ... 3 10 17 24 31 S ... 4 11 18 25 ...

CALENDAR, 1949

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SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.
S ... 4 11 18 25 M ... 5 12 19 26 Tu ... 6 13 20 27 W ... 7 14 21 28 Th ... 1 8 15 22 29 F ... 2 9 16 23 30 S ... 3 10 17 24 ...	S ... 2 9 16 23 30 M ... 3 10 17 24 31 Tu ... 4 11 18 25 ... W ... 5 12 19 26 ... Th ... 6 13 20 27 ... F ... 7 14 21 28 ... S ... 1 8 15 22 29 ...	S ... 6 13 20 27 M ... 7 14 21 28 Tu ... 1 8 15 22 29 W ... 2 9 16 23 30 Th ... 3 10 17 24 ... F ... 4 11 18 25 ... S ... 5 12 19 26 ...	S ... 4 11 18 25 M ... 5 12 19 26 Tu ... 6 13 20 27 W ... 1 8 15 22 29 Th ... 2 9 16 23 30 F ... 3 10 17 24 31 S ... 4 11 18 25 ...

OBSTETRIC TABLE.

The calculation is made from the first day of the last Menstruation, based on an average gestation period of 280 days.

In Leap Year, if Feb. 29 is included in the 280 days period, deduct one day from the date given in the lower line.

January October	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7	January November
February November	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5	February December
March December	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5	March January
April January	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4	April February
May February	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 1 2 3 4 5 6 7	May March
June March	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6	June April
July April	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7	July May
August May	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7	August June
September June	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7	September July
October July	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7	October August
November August	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6	November September
December September	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6 7	December October

OBSTETRIC ENGAGEMENTS

Name and Address	Date Engaged	Date Expected	No. of Labour	Age	Date Birth	Sex	Fee	Remarks (e.g., Name of Nurse)
Dr. Poole East Pathologist								Port Moresby
Anderson & Dixon Building Contractors								Port Moresby
(Mrs A. is Thomas's stepdaughter)								
Dr. Gunther 4th in charge of Govt. Medical Service								Port Moresby
Mrs Williams ? friend Moresby Haf. Going up in May by boat								friend of Dr. Weston's
Mr Arch Anderson YMCA Townsville								Andy's brother
> Remember Dr. Wheatland of C.S.L. to him								
Any Dr. going into Dutch N.G. among Negritos								
Dr. Grayland of C.S.L. wants serum, also keeping up of locality & locality of parent.								
Joan Kephauq in D.P.H. in Port Moresby.								
Mrs Green's brother in Maryal Finischhafen								
Mr John Flint in Brisbane, lab of Papua, ^{cousin} nephew, Miss Crain								
Also possibly see Dr. Bonball								
Dr. Lancaster wants records of births marriages deaths & population of natives in Ore Bay area.								
Hayden MacCallum wants to know if Fin Mores got his letter								
will be please write Travelled on same boat. Hayden as way home from Oslo								Hubbourn
Sister Lambert - Write to Mrs. Heller. C/o Overseas Corporation								
Capel Court 375 Collins St. Melbourne re success of pressure cooker								
? Write to Mr. Forbes re work								
A Mrs. ? Pava (Miss Prankin) sends love to her mother & sister at Samarai								
Mr Kirkwood of Lab District Officer friend of Mr Ray Clark								
brother of C.T.C.								

OBSTETRIC ENGAGEMENTS

Name and Address	Date Engaged	Date Expected	No. of Labour	Age	Date Birth	Sex	Fee	Remarks (e.g., Name of Nurse)
Bishop, Catherine	Phel	302	Kallista					
Dr. Calver 157 Macquarie St. Sydney								
Dr. Eric Laill	Burwood	1st	Concord Military Hospital					
at Malabarrie			(Bf C)					
Atherton ^{at} Sons Engineers	381	Lalor St. Melbourne						Gen 1420.
Atherton's NSW.		C. Boulton & Co. St. Erskineville						LA 2125-
		at Lalor						LA 2107
								LA 3025-
C.M.S.	93	Rathurst St. Sydney						for Dr. Paul White
H.A. Taylor	Surgical Co.	158	Lat. Lonsdale St. Melbourne					
(Mr. Mr. Martin Fairthorne & Son)								
Mr. Speakman	Lalor St.							for plaster instrument
Mr. Pearce & Co. Richmond	954	Castlereagh St. Sydney						M 2261
(Mr. W.J. Pearce)								for surgical. 1st & 2nd - black for plaster putting back saws - handle.
Mr. Marks at Larpis for cotton black								
Waken Nicks	Mr. Ellis							Mr. Butler
Waken House	Bligh St. Sydney							
Carpenter & Co. Sydney								
								make refrigerators
Felton & Lunnards	Alfred Place, Melbourne							
Mr. Woodbridge								surgical equipment
Mr. Mc Barker								dispensary
Mrs. John Tinnig of Red Cross								arranged books
Labor								Swanston St. lanes
								had volunteered for N.G.
Wright & Co. Products	60-66 York St. Sth Melbourne							for cellophane
								1 Ream each £10
Lonel Birdland	Bf - son in law, for frog							
Dr. Elkins	in charge of Dept. of Anthropology							
Rev Dr. Gaffell	for languages							
Dr. Barbara Wedgwood	for native village life							

OBSTETRIC ENGAGEMENTS

Name and Address	Date Engaged	Date Expected	No. of Labour	Age	Date Birth	Sex	Fee	Remarks (e.g., Name of Nurse)
Drug Suppliers in Sydney Elliott. O'Connell St.								for 1' fusion sub. highest dental plaster
May & Baker 5 Philip St.								for M.B. & thocaine
Johnson & Johnson 200 York St. North								for packs, radiog. lens for plaster, dressing.
Mr. Gladd in Melbourne branch.								
Lawrence 439 Kent St.				M 6751				for Lignois
B.D.H. 250 Pitt Street.								Analox (C.P. salt).
Burroughs Wellcome, Gressy St. Rosebery								for stain
				FF 2281.				
Baya Pharma Co. 56 Young St.						B	6064.	
Faulding 98 Castlereagh				MX 2271.		?		make Moplex in rubber-capped bottles.
Glaxo 230 Eliza St. Sydney				MA 5356.				make desford for I.V. was also Penicillin
Dunlop & Barnett Glass								for tubing.
Acme Bedstead Co. Pty Ltd. 46-50 McEwen St.								Alexandria NSW.
Kodaks. (Mr R. Breach) Long St. Sydney								for films & prints up to 2000. N-Gal

Mission

OBSTETRIC ENGAGEMENTS

Name and Address	Date Engaged	Date Expected	No. of Labour	Age	Date Birth	Sex	Fee	Remarks (e.g., Name of Nurse)
Mr. Triere Lane Boring								Gifts from for Guild of St. Mary for
MU Bendigo								Mrs. Russell asks for letters & photos
Miss Caswell								remembrances from Bp. Blackwood
Fr. Andrew								
Dr. Loukins								remembrances from Ruth Gladhill
								(married) who used to visit her at
								Stamers. Member S.B. S.C.M.
Fr. Bodger Fr. Fanning								
Fr. Clement Wadakiki & son								John at Tanpota. Greetings from Dick Mac
Small boy at 9 Santa								Football from Fr. Thoma
Grand								Remembrances from Mrs. Mitchell
								Alvie Eager Ruth Buxton
								And what want news
								Mrs. Cranwick - gift - 7 40
Maddy								Elcie's letter - parcel
Mrs. Lane								Love from her son at St. Francis
								Urendah
John Maddy Fr. Purcell								Greetings from Bill G.W.
Minnie Lane								
Richard Thompson								Minnie Lane
Hyphenator before								Parcel from Maddy's father

OBSTETRIC ENGAGEMENTS

Name and Address	Date Engaged	Date Expected	No. of Labour*	Age	Date Birth	Sex	Fee	Remarks (e.g., Name of Nurse)
Books of Possible Value.								
Practical Textbook of Leprosy								Cochrane Oxford and (S. India)
Pathology of Tropical Diseases								Ash, Spitz
The Tropical Diseases Bulletin (the better one)								London Tropical School
The Bulletin of Hygiene								
Symptoms of Clinical Laboratory Methods								
W. E. Bray (Moby St. Louis)								37/6
Light testing for similar kit								Lionel Lawrence
A manual of Practical Tropical Sanitation								
J. Balfour Kirk								Balliere Tinsdall & Co. London
1937 Ed. was								11/-
Journal of Trop. Medicine & Hygiene								monthly
Staples Press London								44/- per year.
Write to Angus & Robertson								about October

APPOINTMENTS

JANUARY, 1948

THURS., JAN. 1st
New Year's Day.

Professional

Private

Drives

Dellys

Steel @ VI. / hour

7 6-10

lenses

1-15

blow lamp

1-18

Antelars

Quenbach

7 30-35

Repairs

sterilizer 16x5x4

4-7-6

meth spirit heater

1-7-6

Ureid stand

3

Enamel cans

10-6

Letters

FRIDAY, JAN. 2nd

Oct. 11 Recd.

mother ✓

13. Watten

Fred

F. Warren ✓

Murphy

John & L.

Mr. Bachelors ✓

Mr. Bachelors

John H.

F. Thompson

19. M.K.

mother

18. Goma.

mother

Bot

F. Warren

Mr. B. d

D. Buckley

leggs

ref

Head of

F. Thompson (3)

JANUARY, 1948

APPOINTMENTS

SAT., JAN. 3rd

Professional *

Private

Batteries.

for microscope everyday 2015-

penicillin 915-

for headlamp 761.

for big truck 920.

SUNDAY, JAN. 4th

Lynsey

APPOINTMENTS

JANUARY, 1948

Professional

Private

MONDAY, JAN. 5th

Remember Dr. Abrams to man in charge of cutting section in Trop. Med. School. He is short & about 65. Dr. A. was there in Army in 1941.

TELEPHONE MU 8748

J. A. Hassell

MANAGER, SURGICAL DEPT.
W. E. FULLER (PTY) LTD.
YENCKEN HOUSE
390 LITTLE COLLINS STREET
MELBOURNE C.1

SOLE AGENTS:
"METALLO" TECHNICAL
MANUFACTURING SUPPLIES

THE REV. K. J. COALDRAKE

Brotherhood of St. Lawrence

V. 9148

FRANKSTON
3748

CARRUM
DOWNS

TUESDAY, JAN. 6th

Procedure before leaving Australia.

See Taxation Dept - Mr. Ferguson in Overseas Clearance.
(Say from Canon W. who asks after his daughter!)
Explain will be away. Get clearance.

Take to Pat at Australia House & get permit
both clearance & permit to Burns Philp & get tickets.

JANUARY, 1948

APPOINTMENTS

WED., JAN. 7th

Professional

Private

Andy will supply NAB
? cellophane
? BP

THURS., JAN. 8th

~~Red Cross Gift~~ Sydney on July, 1st or after

Let Mr. Wither (XBM NSW) know if the Comrades
gave me a gift.

Mrs. Kelly wants to make me a cake. She
knows the Thompsons.

✓ Mavis Cather wants me to take a parcel to Lefor.

✓ If there is time, let Greenwood Comrades know I am back.

✓ Give book to Dr. Capell.

✓ Return Arakawa to Mr. Bell.

David Jones ask for person in charge of Iplandis Island Order
(Miss Wright? correct name) will send material
transfer fee

Let the Palmer at Maresby know when I am coming; arrange
to meet Dr. Gumbel.

Take all the mummies to me.

Red Cross Gift.

(Paper, wash)
APPOINTMENTS

JANUARY, 1948

FRIDAY, JAN. 9th

			Professional	Private
2	P.M.	Wash basin	14" O.A.	
2	P.M.	Kitchen sinks	12"	
2	"	"	7 $\frac{1}{2}$ "	
2	"	Basins	6 $\frac{1}{2}$ " x 4"	
2	"	"	4 $\frac{3}{4}$ " x 3"	
2	"	"	3 $\frac{1}{2}$ " x 2"	
2	"	Tray	17" x 12 $\frac{1}{2}$ "	
2	"	"	12 $\frac{1}{2}$ " x 10"	
2		Refrigerator	2 $\frac{3}{4}$ " x 3 $\frac{1}{2}$ " deep.	

SAT., JAN. 10th

JANUARY, 1948

APPOINTMENTS

SUNDAY, JAN. 11th	Professional	Private
<p>Possible gift.</p> <p>Extra watch or alarm clock</p> <p>Typewriter ribbon</p> <p>" paper + 4 pens. (8 Axi-mail)</p> <p>Truck - box for carrying equipment</p> <p>Bar soap.</p> <p>1928 Mayan Book.</p> <p>Memoranda.</p> <p>Knife</p> <p>Two goggles.</p> <p>Two splines</p> <p>Bottle screws of pins for stocking.</p> <p>OS Lewis Problem of Pain</p> <p>Sponge bag.</p> <p>Rebel work.</p> <p>2 7/11 11/16 bag or haversack</p>		
MONDAY, JAN. 12th		
<p>Thermos flask</p> <p>last shoe</p> <p>cooking book.</p> <p>bed cover & dressing table cover.</p> <p>hair brush.</p> <p>suit.</p> <p>scissors</p> <p>tin fruit.</p>		

JANUARY, 1948

APPOINTMENTS

THURS., JAN. 15th	Professional	Private
Parcels & Packages for New Guinea.		
Sent on MacLaren King		Delivered O & Bony
✓ 4 boxes of my own		"
✓ 2 " Red Cross stuff. Vi.		"
At Samarai.		
Blankets Miss Henslowe		
Sent on MacLaren King		
✓ 1 package { 2 basin stands. covers		Delivered O & Bony
1 gas-cup		
✓ Fring.		"
FRIDAY, JAN. 16th		
Personal luggage.		
Cases 1, 2, 3, Elliott & Standards		Packed at H. D.
Package 4		2 Thomas splints
Cases 5, 9, 6, big little		ABM. Melb.
Package 7 chain		
✓ Cases 8 & 9		ABM NSW

APPOINTMENTS

JANUARY, 1948

SAT., JAN. 17th

Professional

Private

SUNDAY, JAN. 18th

JANUARY, 1948

APPOINTMENTS

MONDAY, JAN. 19th

Professional

Private

Dr. Luntzer

NAB - not on list Harry got 400
 1000. Do we supply?
 Are our 2 ¹³ Hosp. recognized as training school?
 what does that imply?
 Isolation of Refers.

Administration

TUESDAY, JAN. 20th

Richardson Thompson

Language books for Dr. Capell

Status of our Hospitals as training hosp?

Policy regard wages & cost

payment to Hosp by members

Employment of non Christians eg. make M.D.

Building of Hospital - materials

Discuss pay my subscriptions inc. Soc. Inf. med.

Policy towards AB M Review.

Dr. Joan R.

Things to purchase in
Melbourne.

APPOINTMENTS

JANUARY, 1948

Professional

Private

WED., JAN. 21st

more cutaneous
Matthews App?

enamel cans. } Rope 146

Watson Victor Bull £3.

To pick up infant's BT needle.

Leather for insoles
Take up for Charlie
envelopes from Bob.

John L. Lee.

S.C.H.

Cellophane
re 4 intercollegian

Kate Campbell's infant feeding
Averys scales.

cellophane

CSH.

APM.

get Lubi's stuff.

THURS., JAN. 22nd

JANUARY, 1948

To bring from home

APPOINTMENTS

FRIDAY, JAN. 23rd

Professional

Private

Things to look for Army Disposal Box
Physiology notes on sight testing
Pyriminase needs for Bina's use
old baggage label

SAT., JAN. 24th

Lake to Hobart.

APPOINTMENTS

JANUARY, 1948

SUNDAY, JAN. 25th

Professional

Private

Fred's stamps

my envelopes N.G. Collect envelopes.

Camera for paper breaking

Little camera for Reg.

MONDAY, JAN. 26th

Fdn. Aust., 1788. Obs. as Aust. Day.

JANUARY, 1948

APPOINTMENTS

TUESDAY, JAN. 27th

Professional

Private

Addresses for possible future use Left

W. A. Webb	Hon Sec. Miss Bryant	C/o Vic. ABM gave	£5-5-0
St James's & St K.	Ms. Shachan		22-0-0
(Child of Waver)		959 Canterbury Rd. Box Hill	
St Dunstan's Parish	for Mr. P.B. Hayman		10
	The Vicarage,	163 Watte Wy Rd. Camberwell	
St Mary's & Presb	for Mrs. Morrison		10
		189 Wood St. & Presb	
Mr. Robinson	40 Walgah St. & St. Kilda		hypo needle
Dorothy Rogers & other	old & PS girls off		2 10.
(friend of Mrs. Heyward)	all parish to St. Kilda		
Mrs. Barclay	51 Antie St. St. Yarra S.E.		10
is also Sec. C.C.	St. Yarra W.A. also		10
Mrs. Rudwick Sandringham	for Vic ABM.		Blankets 6/0

WED., JAN. 28th

Mrs. Helen North	Physiotherapist	42 Chelmsford av. Lindfield NSW.
Hospital Perth W.A.	- want 4-10.	
Mrs. Barbara Bain	C/o ABM. Buss St. Brisbane	To go to
	held meeting. Doing Infant Welfare Trust. Treasurer.	
Mrs. Mays	W.A. C/o ABM Brisbane	
	Want to be asked for any needs	
Mrs. Olive Townson	with, want 2 last B. U. & St. Borne	
	has to pay for nurse boy and for gift of	
	about £60 to Hosp.	
Mrs.		
	gift of £1-1. Give personally	
Rev. Mr. R. H. Mullen	St Francis & Mundah Brisbane	
	been to help the broadcasting medical N.B. work &	
	wants information. Please let him know	
Mr. A. K. Lawton	Campbell person Mundah member of	
(A. H. H. H.)		areoplane.

"Lactogen" is recommended for Nursing Mothers.

JANUARY, 1948

Private

THURS., JAN. 29th

Pot. Cash

. 17 - 10

pass. work

flower to boat.

sent a

all.

Dec. Dec. W.

NSW.

B no trace

Drugg

sp. 2 NE 2.
G.

FRIDAY, JAN. 30th

APPOINTMENTS

JANUARY, 1948

Professional

Private

THURS., JAN. 29th

Red 1st blackboard got his life 6. 10 years want

Baby's crocheted cot quilt (wool) flowers to book.

W.A. Kallene Hill, NSW

✓ for Mrs O.C. Cooper sent a

St Stephen's Rectory ad.

Kallene Hill drive see WA

sent by K. Purcell NSW

2 patchwork quilts ab no cross cut

Women's Guild, Briggs

St John's Rectory

Canberra

Knitted patchwork field NE 2

Flora Walker (HERELD) a.

St John Baptist Church

Wellington

NSW.

Bandage 1 long towel

Mrs G Mackenzie

Kumaradgel

Canberra NSW

FRIDAY, JAN. 30th

Mr. D. Herborn D.P.H. Lae. Public Health.
Lab. servant.

Dr. Ellis... place
at Lae in Mr. Herborn's place
Mr. Bailey after July. for all practical
problems
insect control re.
Carl Gunther Bulolo.

Kabaul Native Hospital

Mr. Palframan & wife. Med assistant
who runs Hosp. Feeding natives re.
Beds nursing Hosp.
mention Dr. Ellis.

APPOINTMENTS

JANUARY, 1948

THURS., JAN. 29th

Professional

Private

Miss Housman. in Rls ABM. Office 28 years. want
Miss Lillian Benham Sydney sent flowers to boat.
Mrs Alice Kelly 4 Wandella Ave Rossmore N.S.W. sent a
cake to Jean & me. Sister of Ethel Shadle.
Mrs Meyer Brisbane Dist. Sec. W.A.
Mavis Kather 1 Buckingham Rd Kellara N.S.W.
Miss Della Hutchinson 375 Collier St Melb no present
Fairbank Intermediate Class 1945 per Barbara Briggs
CEGGS. Brighton
ABM. Hobart mail 125 Macquarie St.
Miss A. J. Lawson, 152 Alexandra Rd Clayfield N.E. 2
A.

FRIDAY, JAN. 30th

JANUARY, 1948

APPOINTMENTS

SAT., JAN. 31st

Professional

Private

SUNDAY, FEB. 1st

FEBRUARY, 1948

FEBRUARY, 1948

APPOINTMENTS

MONDAY, FEB. 2nd

Professional

Private

TUESDAY, FEB. 3rd

FEBRUARY, 1948

APPOINTMENTS

WED., FEB. 4th

Professional

Private

Those who wish to train at Eroro.

& Randolph Tivita

Arthur Prout

Oreta

John Smith

McComide

Adrian

Langara

Sefora for local dish.

accepted

Ship boy

accepted.

THURS., FEB. 5th

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

FRIDAY, FEB. 6th

I met you at
House of Epiphany
at end of July
last year!

21 Queens Rd.,
New Lambton
(Newcastle)
Jan. 15th '49

My dear Dr. Biggs

May I wish you a very
happy 1949 and progress
in your work.

I hope you have had a
happy Christmastime in your
new surroundings. I saw
from "The Review" you had
arrived safely and when in
Sydney at the W.A. Council
meeting heard of the arrival
of your sewing machine!

FEB. 7th

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

FRIDAY, FEB. 6th

on Nov. 18th I posted you a food
(11 lbs)
parcel hoping it would arrive
in time for Christmas - if
it hasn't, make inquiries, will
you? I addressed it in the
same way as this envelope,
I hope it is right and not
likely to cause delay.

I have expected you have
been so busy that time has
not allowed you to acknowledge
all your parcels but feared
if it ~~is~~ time hadn't arrived
inquiries should be made before
it got too late.

Hoping it has done so and
that you will enjoy it -

(acting chairman
of Newcastle
W. A. -
1948.

I am
Yours sincerely
(W?) Renee Hughes

FEB. 7th

✓ ack

Christines 1948

(official)

(Name) Cath, tin asparagus, dried vegs, rips,
car. trumpet, old linen)

C of S.S. B' week. Bandages, asparagus, tin of pens.
(2 parcels) soap writing pad and 1 stick tale
lanoline, pens. plum pudding fruit
tape.

Heralds of B' King) H.K. 2 mill. from H.K. Bundarra.
40 ABM NSW) H.K. Darlinghurst 2 bags, bankies +.
375 George St. St. John's

Gift of St. Barnabas W. writing paper. envs. soap. etc.
B' bank

ABM. B' bank. 3 envs. soap. 2-0. bandages, boracic
band aid in tin 3 good aprons

Mr. Mervyn Hughes Jam, sweets, powder, soap washer
D. A. L. W.A. jug cover, fruit.
Newcastle Diocese

also Miss Labor Sec.

?? Sender.

Wool bandages soap powder.

Label of Rofus
Miss K. H.

W.A. Penguin Regent pencil ^{crayons} books, quilt, soap
(Mrs W. Elphinstone) aschehi bag, note book, child's books
Lefthand crayons safety pins

Ch. Cath. Grafton Tooth paste + brush, tale washer
W.A. kettle holder, needles + card.

Heralds of the King Book, tale, 20th. sweets vegetable
20th. tales unscales uniform for clean towel
old linen. 2 bags.

Mrs W. Garrett Food jam mustard mill
13 Zeege's Rd. golden syrup 1/2 lb tea.
New Lambton NSW. Newcastle.

G.F.S. Luanleypen билет requisite
To Betty Burns
see Father High School

W.A. St. Paul's Burnwood Washes v towels
W.A. St. Peter's Cathedral bandages 1 washer
Armidale

St. Barn. 500 ft fruit bank pygover (5 in)
cc. B' week fruit

July 1, 1949.

(Continued from page 110.)

accepted a quota. Some responded so splendidly last year that £549 was given. Let us do still better this year. Contributions may be sent to any Diocesan Secretary (see list below), or to the Federal Secretary, A.B.M. Office, 14 Spring Street, Sydney.

DIOCESAN SECRETARIES.

Adelaide—Miss M. Green, 28 Prescott Terrace, Toorak Gardens, South Australia.

Armidale—Mrs. H. V. C. Lancaster, The Vicarage, Barraba, N.S.W.

Ballarat—Miss L. Cadden, 14 Pleasant Street, Ballarat, Victoria.

Bathurst—Mrs. A. Mills, 191 Hope Street, Bathurst, N.S.W.

Brisbane—Mrs. Noyes, Surrey Street, Nundah, Queensland.

Goulburn—Mrs. W. M. Holliday, The Rectory, Queanbeyan, N.S.W.

Grafton (Northern Archdeaconry)—Mrs. R. Edwards, The Rectory, Murwillumbah, N.S.W.

Grafton (Southern Archdeaconry)—Mrs. P. F. Tilghman, The Rectory, Bellingen, N.S.W.

Melbourne—Miss L. Bryant, 11a Avondale Road, Armadale, S.E.3, Victoria.

Newcastle—Miss H. Paton, 19 Tyrrell Street, Newcastle, N.S.W.

North Queensland—Mrs. L. Crowe, St. Peter's Rectory, West End, Townsville, Queensland.

Perth—Mrs. A. Heygate, Queenslea Drive, Claremont, Western Australia.

Riverina—Mrs. C. Kirkpatrick, The Rectory, Hay, N.S.W.

Rockhampton—Mrs. Morgan Lander, Edward Street, North Rockhampton, Queensland.

Sydney—Miss L. King Kemp, c/- A.B.M. Office, 375 George Street, Sydney.

Tasmania—Miss J. Perkins, c/- A.B.M. Office, 125 Macquarie Street, Hobart, Tasmania.

DIOCESAN NEWS.

Adelaide.—The annual meeting was held on May 31st at S. Columba's Parish Hall, Hawthorn. There was a record attendance. The Bishop of Adelaide presided and gave an inspiring address. After congratulating the President, Mrs. A. E. Weston, and Diocesan Secretary, Miss M. Green, on the good work done in the year, the Bishop proceeded to tell of that great gathering at Lambeth of Bishops from all parts of the world, representing the fruits of the missionary spirit in the Anglican Communion.

It is satisfactory to be able to report some further affiliations.

A.B.M. REVIEW

Deputations have been arranged in six country parishes and two in the suburbs, and enquiries concerning missions and requests for literature have come from three parishes over 100 miles from the city.

All branches are busy preparing gifts for Christmas cases and organising functions in aid of missions.

Proceeds from a trading table held at the annual meeting are sufficient to pay for the first year's music tuition for a halfcaste girl from the Forrest River. M. GREEN, Hon. Sec.

Melbourne.—At the kind invitation of Miss L. S. Taylor, a very successful Florin Tea was held at the Camberwell C.E.G.G.S. on Saturday afternoon, May 24th. As on previous occasions, Miss G. Claridge arranged a delightful musical programme, and the speaker was Bishop Fortescue Ash, who charmed the audience by his geniality and sense of humour. The proceeds from the Tea amounted to over £12.

Arrangements are being made for the Annual Fair to be held in the Chapter House on Thursday, September 22nd. L. BRYANT, Hon. Sec.

Perth.—Branches in the Perth Diocese are now preparing the Christmas hampers for New Guinea and Melanesia, as these must be ready for despatch from here by the end of July.

We do enjoy reading the Rev. Frank Coaldrake's "Newsletters" very much, and we hope to be able to help by sending food parcels and warm clothing for him to distribute.

We have also had interesting letters from Miss Edith Andrews in Sarawak. She is doing splendid work as Headmistress of St. Mary's School at Kuching, and will appreciate our prayers and all other help we can give.

Our financial year ends on May 31st, and our annual meeting is to be held on 6th July.

We look forward with pleasure to meeting the new Chairman of the Board when he visits Western Australia. A. HEYGATE, Hon. Sec.

"DISEASES COMMONLY MET WITH IN MELANESIA."

We understand that a former Medical Officer of the Melanesian Mission, Dr. Clifford James, now resident in Opotiki, New Zealand, who published "Diseases Commonly Met with in Melanesia" in 1937, and which had a huge sale throughout the Pacific, has compiled another edition which will be available shortly. Orders, inquiries, etc., may be addressed to the Mission Office, 41 Shortland Street, Auckland. The price has not yet been ascertained, but is understood to be probably 6/6.

A.B.M. REVIEW

July 1, 1949.

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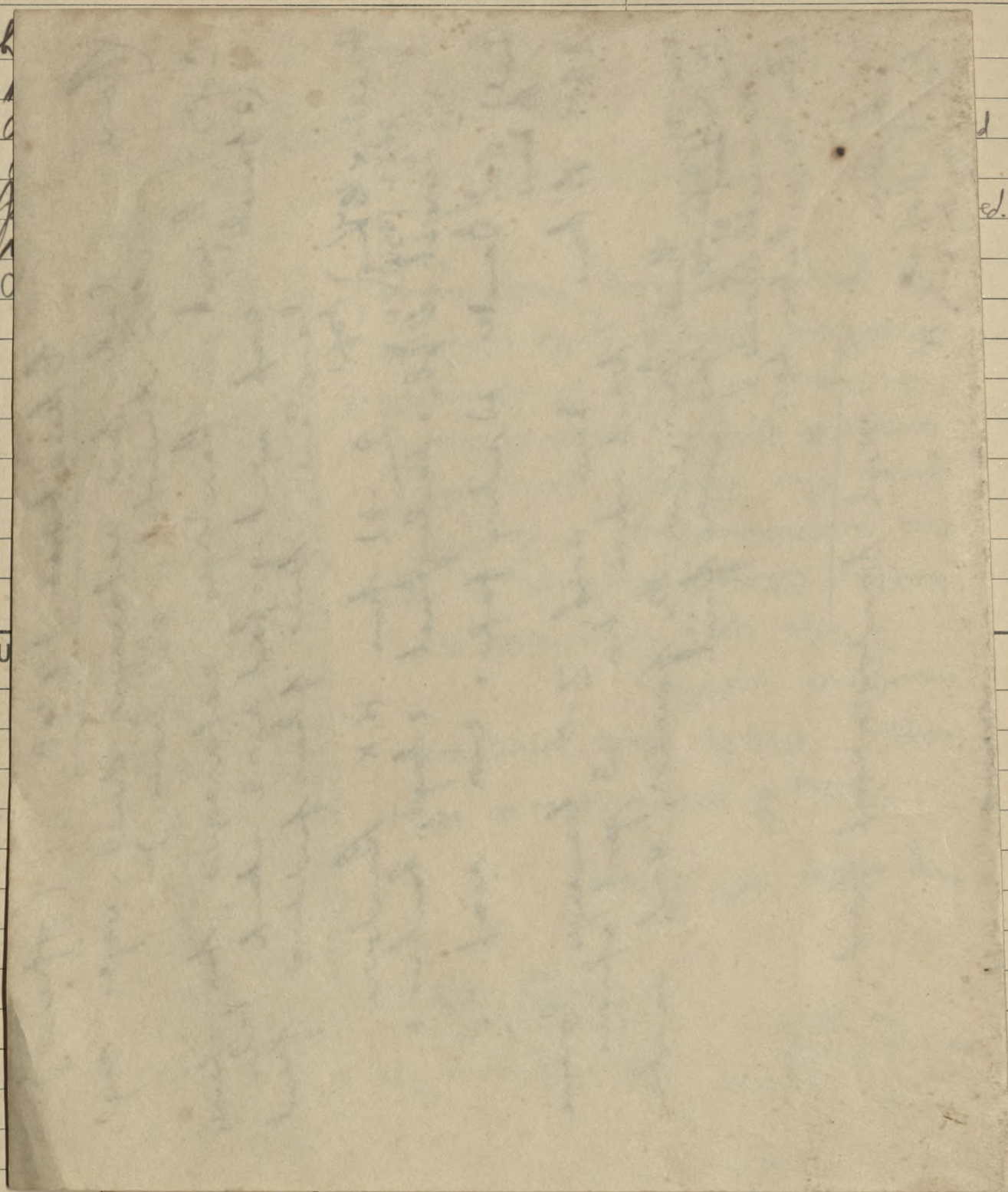
FEBRUARY, 1948

APPOINTMENTS

WED., FEB. 4th

Professional

Private



THU

"Vi-Lactogen" is indicated for feeding of premature babies.

APPOINTMENTS

FEBRUARY, 1948

FRIDAY, FEB. 6th

Professional

Private

Those who wish to train at Laguna.

Seymour Feb. 16

Menapi

Adrian

to for prob. for local Dispensing

SAT., FEB. 7th

FEBRUARY, 1948

APPOINTMENTS

Coastal

SUNDAY, FEB. 8th

Professional

Private

*To write
St. James
Holladay*

*Visited 891.49.
Letter written
Fred
Maha
Lib.*

*To write
St. James
Holladay*

MONDAY, FEB. 9th

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

TUESDAY, FEB. 10th

WED., FEB. 11th

FEBRUARY, 1948

APPOINTMENTS

THURS., FEB. 12th

Professional

Private

FRIDAY, FEB. 13th

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

SAT., FEB. 14th

SUNDAY, FEB. 15th

FEBRUARY, 1948

APPOINTMENTS

MONDAY, FEB. 16th

Professional

Private

TUESDAY, FEB. 17th

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

WED., FEB. 18th

THURS., FEB. 19th

FEBRUARY, 1948

APPOINTMENTS

FRIDAY, FEB. 20th

Professional

Private

SAT., FEB. 21st

FEBRUARY, 1948

APPOINTMENTS

Professional

Private

SUNDAY, FEB. 22nd

MONDAY, FEB. 23rd

Milo—a valuable food for expectant mothers.

FEBRUARY, 1948

APPOINTMENTS

TUESDAY, FEB. 24th

Professional

Private

WED., FEB. 25th

When Maltose and Malto-dextrin are indicated prescribe "Maltogen."

APPOINTMENTS

FEBRUARY, 1948

Professional

Private

THURS., FEB. 26th

FRIDAY, FEB. 27th

FEBRUARY, 1948

APPOINTMENTS

SAT., FEB. 28th

Professional

Private

SUNDAY, FEB. 29th

"Vi-Lactogen" with added Vitamins A and D.

APPOINTMENTS

MARCH. 1948

Professional

Private

MONDAY, MARCH 1st
8-Hours Day. Tasmania.

TUESDAY, MARCH 2nd

MARCH, 1948

FRIDAY, MARCH 5th

Professional

Private

SAT., MARCH 6th

MARCH, 1948

APPOINTMENTS

[illegible]

APPOINTMENTS

MARCH, 1948

Professional

Private

TUESDAY, MARCH 9th

WED., MARCH 10th

MARCH, 1948

APPOINTMENTS

Professional

Private

SAT., MARCH 13th

SUNDAY, MARCH 14th

MARCH, 1948

APPOINTMENTS

[illegible]

Nestlé's Malted Milk is recommended for post-operative cases.

APPOINTMENTS

MARCH, 1948

Professional

Private

WED., MARCH 17th

THURS., MARCH 18th

"Lactogen" is recommended for Nursing Mothers.

MARCH, 1948

APPOINTMENTS

[illegible]

"Vi-Lactogen" resembles Breast Milk in composition.

APPOINTMENTS

MARCH, 1948

Professional

Private

SUNDAY, MARCH 21st
 Sunday Before Easter, Palm Sunday.

MONDAY, MARCH 22nd

MARCH, 1948

APPOINTMENTS

[illegible]

APPOINTMENTS

MARCH, 1948

Professional

Private

THURS., MARCH 25th

FRIDAY, MARCH 26th

Good Friday.

"Vi-Lactogen" is indicated for feeding of premature babies.

MARCH, 1948

APPOINTMENTS

SAT., MARCH 27th
Easter Saturday (Easter Eve)

Professional

Private

SUNDAY, MARCH 28th
Easter Sunday.

"Vi-Lactogen" is particularly suitable for supplementary feeding.

MARCH, 1948

APPOINTMENTS

Professional

Private

MONDAY, MARCH 29th

TUESDAY, MARCH 30th

Labour Day, Melbourne.

"Lactogen" is easily digested by the aged.

MARCH, 1948

APPOINTMENTS

[illegible]

"Vi-Lactogen" babies are not troubled with constipation.

APRIL, 1948

APPOINTMENTS

Professional

Private

FRIDAY, APRIL 2nd

SAT., APRIL 3rd

"Lactogen" contains added Vitamins A and D.

APRIL, 1948

APPOINTMENTS

SUNDAY, APRIL 4th

Professional

Private

MONDAY, APRIL 5th

"Lactogen" is suitable for adult feeding where ordinary cows' milk is not tolerated.

APRIL, 1948

APPOINTMENTS

Professional

Private

TUESDAY, APRIL 6th

WED., APRIL 7th

APRIL, 1948

APPOINTMENTS

THURS., APRIL 8th

Professional

Private

FRIDAY, APRIL 9th

APPOINTMENTS

APRIL, 1948

Professional

Private

SAT, APRIL 10th

SUNDAY, APRIL 11th

Use Maltogen in place of sugar on cereals and puddings.

APRIL, 1948

APPOINTMENTS

MONDAY, APRIL 12th

Professional

Private

TUESDAY, APRIL 13th

APRIL, 1948

APPOINTMENTS

WED, APRIL 14th

Professional

Private

THURS., APRIL 15th

When Maltose and Malto-dextrin are indicated prescribe "Maltogen."

APRIL, 1948

APPOINTMENTS

FRIDAY, APRIL 16th

Professional

Private

SAT., APRIL 17th

Milo provides mothers with more minerals.

APPOINTMENTS

APRIL, 1948

Professional

Private

SUNDAY, APRIL 18th

A.S.C.M.
18 Collins St
Melbourne
Vic
Father Moran
Samarai
Hayden McCallum

MONDAY, APRIL 19th

APRIL, 1948

APPOINTMENTS

TUESDAY, APRIL 20th

Professional

Private

WED, APRIL 21st

APRIL, 1948

APPOINTMENTS

THURS., APRIL 22nd

Professional

Private

FRIDAY, APRIL 23rd

"Vi-Lactogen" is free from all pathogenic organisms.

APRIL, 1948

APPOINTMENTS

SAT., APRIL 24th

Professional

Private

SUNDAY, APRIL 25th

Anzac Day.

Sufficient organic iron now added to "Lactogen" and "Vi-Lactogen."

APPOINTMENTS

APRIL, 1948

MONDAY, APRIL 26th

Professional

Private

TUESDAY, APRIL 27th

APRIL, 1948

APPOINTMENTS

WED., APRIL 28th

Professional

Private

THURS., APRIL 29th

Capt. Cook entered Botany Bay, 1770.

APPOINTMENTS

APRIL, 1948

Professional

Private

FRIDAY, APRIL 30th

MAY, 1948

SAT., MAY 1st

MAY, 1948

APPOINTMENTS

[illegible]

APPOINTMENTS

MAY, 1948

Professional

Private

TUESDAY, MAY 4th

WED., MAY 5th

Labour Day, Q. and W.A.

MAY, 1948

APPOINTMENTS

THURS., MAY 6th

Professional

Private

FRIDAY, MAY 7th

"Lactogen" is recommended for Nursing Mothers.

APPOINTMENTS

MAY, 1948

Professional

Private

SAT, MAY 8th

SUNDAY, MAY 9th

MAY, 1948

APPOINTMENTS

MONDAY, MAY 10th

Professional

Private

TUESDAY, MAY 11th

APPOINTMENTS

MAY, 1948

Professional

Private

WED., MAY 12th
Bank Holiday, Perth.

Bank Holiday, Perth.

THURS., MAY 13th

MAY, 1948

APPOINTMENTS

FRIDAY, MAY 14th

Professional

Private

SAT., MAY 15th

"Vi-Lactogen" is indicated for feeding of premature babies.

APPOINTMENTS

MAY, 1948

Professional

Private

SUNDAY, MAY 16th

MONDAY, MAY 17th

MAY, 1948

APPOINTMENTS

TUESDAY, MAY 18th

Professional

Private

WED., MAY 19th

"Lactogen" is easily digested by the aged.

"Vi-Lactogen" babies are not troubled with constipation.

POST-WAR NEW GUINEA

Some Facts about the Post-War Administration.

By

THE RIGHT REVEREND G. H. CRANSWICK, B.A., D.D.

Chairman of the Australian Board of Missions.

The Bishop was travelling in Papua during July, August, and September, 1946.



USING ALL KINDS OF CRAFT IN SENDING FORTH THE GOSPEL.

The Administration.

One of the extraordinary situations is the apparent impossibility of communication authorities to give us in Australia a uniformly fair and just account of men in responsible positions. For instance, shortly before I went to New Guinea it had been reported here that a large meeting of natives at Moresby passed a resolution which stated that the Administrator did not understand them, asking for his withdrawal and his replacement by Mr. Leonard Murray. On our arrival at Moresby we learned that the meeting was held, but that the terms of the resolution

MAY, 1948

APPOINTMENTS

SAT., MAY

Dr. A. Legg

were "The new Administrator understands us and we want him to stay with us until he dies." Or again, it was new to me to learn that Mr. Ward's Model Village is situated at the international doorway to the settlement of Port Moresby, that its inhabitants had to be forcibly removed from their old homes for reasons of war and that the present village is a collection of most appalling hovels made of material gathered here, there and everywhere. Thus rebuilding cannot be avoided and is a matter of ordinary justice to the villagers. Moreover, it was quite new to me to find that the nearest native building materials are found at least some thirty miles away and that it is therefore cheaper to build with imported materials, and finally it was new to me to discover that the sum set on one side for this work will provide a maximum of £130 to be expended on each house. It is impossible not to wonder if such stupidly erroneous reports as these which come to us have any political significance.

The governmental position in New Guinea needs to be understood to be appreciated. I believe I am right in saying that at present there is no Administrator of New Guinea in view of the retirement of the former holder of that office. Mr. Leonard Murray is the Lt.-Governor of Papua, his term of office not having expired. For defence and other reasons the Australian Government has decided to combine the two territories under one Administration and has appointed a provisional Administration and government.

Colonel John Keith Murray, Administrator of the new provisionally-combined Territory—styled "Papua-New Guinea"—brings to his tasks a fine range of qualities that merit confidence. After military service in both World Wars, he became Chief Instructor of the Army School of Civil Affairs which trained Patrol Officers for ANGAU. Between the wars he was Professor of Agriculture at the University of Queensland and Principal of the Queensland Agricultural College. He is a member of the Council of Scientific and Industrial Research of the Commonwealth, and possesses specialised knowledge of tropical agriculture (including native agriculture) in the Territory he now administers. This is of special importance at the present stage of development, when the scientific improvement of the natives' food supplies and the establishment of native agriculture on a commercial basis to increase the monetary wealth of native villages are two policies which are regarded as essential if Papua-New Guinea is to prosper and if native health and standards of living are to be improved.

The selection of a scientist as the new Administrator is a token that the Australian Government will endeavour to apply to an increasing extent the methods of scientific research to the economic and cultural problems of the Territory. Moreover, the Commonwealth Government intends to establish on a permanent basis the Australian Pacific Territories' Research Council, which will undertake research into the problems of tropical agriculture and animal husbandry, tropical medicine and hygiene, and various other problems that are important for the economic, political and cultural advancement of Papua-New Guinea. There is no doubt that the Commonwealth Government, and in particular its Minister for External Territories, is regarding with utmost seriousness its responsibilities to the native peoples, which it is considered certain that UNO will commit to its care, and that in so doing it merits the interest, the confidence and the loyalty of its citizens.

The Public Service.

Although a regular number of cadets is receiving preliminary training and is being sent out for a period of probationary service the background of the public service of the new combined Territory consists of former public servants of Papua and of the Mandated Territory. Unfortunately, there is a grave deficiency in the number of experienced officials available, owing mainly to war casualties, retirements on the score of age, the fact that before the Japanese invasion the public service in each Territory was seriously understaffed because of inadequate public revenue.

Y, MAY 24th

War casualties have been grievous, both in respect of the number and of the particular officers who perished. Among the dead are a majority of the members of the Legislative and Executive Councils of Mandated Territory, including nearly all the senior and most experienced departmental heads of the central government of the Territory. When it is realised in addition that most of the senior officials of the Territory of Papua have retired because of advancing age it will be seen that the new Administrator of Papua-New Guinea is deprived of the services of experienced officers, not only at the outset of his regime but also in a critical era of reconstruction and development when their assistance would have been invaluable.

Welcome by the Government.

On the arrival of our plane at the Port Moresby 'drome—made for ever historic as the nearest point which the Japanese reached in their advance towards Australia—the Administrator invited me to be his guest at Government House. During my stay I was very struck with the generous amount of time His Honour managed to give me. Although he was obviously hugely busy he seemed able most graciously to place himself at my disposal for the discussion of subjects in which we are mutually interested. Before I left New Guinea I had grown to respect and trust Col. Murray, and to admire not only the earnestness and conscientiousness with which he approaches every task and in particular his every contact with the natives, but also the manifest sincerity and straightforwardness of his words and actions. I do not doubt that we have reason to be very thankful for his appointment, nor that he and his government will follow the enlightened and benevolent rule of the late Sir Hubert Murray.

On my second morning the Administrator and his government gave me an official welcome to the Territory and invited me to address them. The same evening the Administrator presided at a public meeting at which by invitation I spoke on the subject of the present world situation.

Y, MAY 25th

Administrative Co-operation with Missions.

On my last day in New Guinea the Administrator asked me to call on him at his office. To my surprise I found with him his four principal departmental directors, and I was invited to discuss my experiences during nine weeks of travel. However, I always shrink from addressing responsible people without preparation. I therefore suggested that they might ask me questions. This they did, and for some one and a half hours we talked of many important matters concerning such questions as future reform policies, development of medical facilities, the rehabilitation of Papuan Infantry Battalion boys, personal contacts with isolated district officers and missionaries, and education plans. Three things impressed me. First, the immense handicap suffered by these men (like missionaries) in the lack of transport and communication facilities; second, their unanimous and most evident desire to serve effectively every one (brown and white) alike; and thirdly, their complete and even anxious readiness to co-operate with missionary leaders. Toward the end of our discussion I spoke of the recent Conference in Sydney convened by the Minister for External Territories to enable Mr. Groves, the Director of Education in the Papua-New Guinea Administration, to meet representatives of home base missionary organisations. I urged what I felt to be a pressing need, viz., a conference in New Guinea between the Director and the heads of all missions in the Territories. I met with instant response. The Administrator at once fixed a date, and asked his colleagues to arrange air transport at government expense for all missionary representatives and to take every necessary step to ensure an adequate representation. It seemed to me that this was a very wonderful gesture of co-operation.

Missionaries and Government in Conference on Education

The Conference was opened on October 9th in Port Moresby and continued for three days. Col. Murray presided and when he was called away to other engagements Mr. Groves acted as his deputy. The scope of the Conference was widened to include Medical Services and Agriculture. Some thirty-five representatives of all the Missions attended. At the conclusion the delegates expressed unanimous appreciation of the Government's policy for education, health, agriculture and rehabilitation in Papua-New Guinea; they asked that the Prime Minister might be informed of their resolution, and went on to say "The Missions further desire to express their gratitude to the Minister for External Territories (Mr. Ward) for initiating this policy, which, we firmly believe, if it is faithfully and fully implemented, will ensure the spiritual and material advancement of the native peoples to whom Australia is so greatly indebted."

During November when the Administrator was in Australia he spoke enthusiastically of the Port Moresby Conference, and expressed the opinion that the Conference was the most important and significant single thing which the Administration had done since its inception. His Honour went on to say that the gathering together at Port Moresby of representatives of all the missionary organisations not only brought the Administration face to face with that large body of men and women who are doing important work among the native populations, but it enabled a large measure of unanimity to be reached on the questions of educational problems; moreover it would save the Administration from pressing too hard with policies and proposals to which the Missions could not subscribe. Col. Murray added that the Conference had done perhaps more than anything else could do to translate into reality the education programme which the Commonwealth Government had adopted.



APPOINTMENTS

MAY, 1948

Professional

Private

MONDAY, MAY 24th

TUESDAY, MAY 25th

"Lactogen" is suitable for adult feeding where ordinary cows' milk is not tolerated.

MAY, 1948

APPOINTMENTS

WED., MAY 26th

Professional

Private

THURS., MAY 27th

APPOINTMENTS

Private

FRIDAY, MAY 28th

SAT., MAY 29th

MAY, 1948

APPOINTMENTS

SUNDAY, MAY 30th

Professional

Private

MONDAY, MAY 31st

APPOINTMENTS

JUNE, 1948

Professional

Private

TUESDAY, JUNE 1st

WED., JUNE 2nd

JUNE, 1948

APPOINTMENTS

THURS., JUNE 3rd

Professional

Private

FRIDAY, JUNE 4th

JUNE, 1948

APPOINTMENTS

Professional

Private

SAT., JUNE 5th

SUNDAY, JUNE 6th

Milo provides mothers with more minerals.

JUNE, 1948

APPOINTMENTS

MONDAY, JUNE 7th
Foundation Day, W.A.

Professional

Private

TUESDAY, JUNE 8th

APPOINTMENTS

JUNE, 1948

Professional

Private

WED., JUNE 9th

THURS., JUNE 10th

JUNE, 1948

APPOINTMENTS

FRIDAY, JUNE 11th

Professional

Private

SAT., JUNE 12th

"Vi-Lactogen" is free from all pathogenic organisms.

APPOINTMENTS

JUNE, 1948

Professional

Private

SUNDAY, JUNE 13th

MONDAY, JUNE 14th

JUNE, 1948

APPOINTMENTS

TUESDAY, JUNE 15th

Professional

Private

WED., JUNE 16th

APPOINTMENTS

JUNE, 1948

Professional

Private

THURS., JUNE 17th

Obs. as King's Birthday (to be Proc.)

FRIDAY, JUNE 18th

"Vi-Lactogen" does not need the addition of Emulsion or Lactose.

JUNE, 1948

APPOINTMENTS

SAT., JUNE 19th

Professional

Private

SUNDAY, JUNE 20th

APPOINTMENTS

JUNE, 1948

Professional

Private

MONDAY, JUNE 21st

TUESDAY, JUNE 22nd

JUNE, 1948

APPOINTMENTS

WED., JUNE 23rd

Professional

Private

THURS., JUNE 24th

APPOINTMENTS

JUNE, 1948

Professional

Private

FRIDAY, JUNE 25th

SAT., JUNE 26th

JUNE, 1948

APPOINTMENTS

SUNDAY, JUNE 27th

Professional

Private

MONDAY, JUNE 28th

APPOINTMENTS

JUNE, 1948

Professional

Private

TUESDAY, JUNE 29th

WED., JUNE 30th

JULY, 1948

APPOINTMENTS

THURS., JULY 1st

Professional

Private

FRIDAY, JULY 2nd

APPOINTMENTS

JULY, 1948

Professional

Private

SAT., JULY 3rd

SUNDAY, JULY 4th

JULY, 1948

APPOINTMENTS

[illegible]

"Vi-Lactogen" is particularly suitable for supplementary feeding.

APPOINTMENTS

JULY, 1948

Professional

Private

WED., JULY 7th

THURS., JULY 8th

"Lactogen" is easily digested by the aged.

JULY, 1948

APPOINTMENTS

FRIDAY, JULY 9th

Professional

Private

SAT., JULY 10th

"Vi-Lactogen" babies are not troubled with constipation.

APPOINTMENTS

JULY, 1948

Professional

Private

SUNDAY, JULY 11th

MONDAY, JULY 12th

"Lactogen" contains added Vitamins A and D.

JULY, 1948

APPOINTMENTS

TUESDAY, JULY 13th

Professional

Private

WED., JULY 14th

APPOINTMENTS

JULY, 1948

Professional

Private

THURS., JULY 15th

FRIDAY, JULY 16th

JULY, 1948

APPOINTMENTS

SAT., JULY 17th

Professional

Private

SUNDAY, JULY 18th

APPOINTMENTS

JULY, 1948

Professional

Private

MONDAY, JULY 19th

TUESDAY, JULY 20th

APPOINTMENTS

JULY, 1948

Professional

Private

FRIDAY, JULY 23rd

SAT., JULY 24th

When Maltose and Malto-dextrin are indicated prescribe "Maltogen."

JULY, 1948

APPOINTMENTS

SUNDAY, JULY 25th

Professional

Private

MONDAY, JULY 26th

JULY, 1948

APPOINTMENTS

THURS., JULY 29th

Professional

Private

FRIDAY, JULY 30th

APPOINTMENTS

JULY, 1948

Professional

Private

SAT., JULY 31st

AUGUST, 1948

SUNDAY, AUG. 1st

"Vi-Lactogen" is free from all pathogenic organisms.

AUGUST, 1948

APPOINTMENTS

MONDAY, AUG. 2nd
Bank Holiday, N.S.W.

Professional

Private

TUESDAY, AUG. 3rd

APPOINTMENTS

AUGUST, 1948

Professional

Private

WED., AUG. 4th

Birth H.M. Queen Elizabeth, 1900.

THURS., AUG. 5th

AUGUST, 1948

APPOINTMENTS

FRIDAY, AUG. 6th

Professional

Private

SAT., AUG. 7th

"Vi-Lactogen" does not need the addition of Emulsion or Lactose.

APPOINTMENTS

AUGUST, 1948

Professional

Private

SUNDAY, AUG. 8th

MONDAY, AUG. 9th

AUGUST, 1948

APPOINTMENTS

TUESDAY, AUG. 10th

Professional

Private

WED., AUG. 11th

APPOINTMENTS

AUGUST, 1948

Professional

Private

THURS., AUG. 12th

FRIDAY, AUG. 13th

AUGUST, 1948

APPOINTMENTS

SAT., AUG. 14th

Professional

Private

SUNDAY, AUG. 15th

APPOINTMENTS

AUGUST, 1948

Professional

Private

MONDAY, AUG. 16th

TUESDAY, AUG. 17th

AUGUST, 1948

APPOINTMENTS

WED., AUG. 18th

Professional

Private

THURS., AUG 19th

APPOINTMENTS

AUGUST, 1948

Professional

Private

FRIDAY, AUG. 20th

SAT., AUG. 21st

AUGUST, 1948

APPOINTMENTS

SUNDAY, AUG. 22nd

Professional

Private

MONDAY, AUG. 23rd

"Vi-Lactogen" is indicated for feeding of premature babies.

Private

TUESDAY, AUG. 24th

WED., AUG. 25th

AUGUST, 1948

APPOINTMENTS

THURS., AUG. 26th

Professional

Private

FRIDAY, AUG. 27th

Sailed Malaita 4 P.M.

"Lactogen" is easily digested by the aged.

APPOINTMENTS

AUGUST, 1948

Professional

Private

SAT., AUG. 28th

11:00 - 12:00

Brisbane 5 P.M.

SUNDAY, AUG. 29th

"Vi-Lactogen" babies are not troubled with constipation.

AUGUST, 1948

APPOINTMENTS

MONDAY, AUG. 30th

Professional

Private

Sailed from Brisbane 11 P.M.

TUESDAY, AUG. 31st

SEPTEMBER, 1948

SEPTEMBER, 1948

WED., SEPT. 1st

Professional

Private

THURS., SEPT. 2nd

"Lactogen" is suitable for adult feeding where ordinary cows' milk is not tolerated.

SEPTEMBER, 1948

APPOINTMENTS

FRIDAY, SEPT. 3rd

Professional

Private

SAT., SEPT. 4th

A. Mousely 5 PM - 11 N.

APPOINTMENTS

SEPTEMBER, 1948

Professional

Private

SUNDAY, SEPT. 5th

MONDAY, SEPT. 6th

Lanoxin 7 AM.

SEPTEMBER, 1948

APPOINTMENTS

TUESDAY, SEPT. 7th

Professional

Private

WED., SEPT. 8th

APPOINTMENTS

THURS., SEPT. 9th

SAMARAI - TAUPOTA

Professional

Private

Left Samarai St George after 6.30 Mass. Good trip. Edward
 Lums & Lawrence very attentive. Coast after East Cape amazing
 steep folded jagged bare hills, green yellow rocks, black
 where burnt. Taupota 4 P.M. 2 Dorothese natives on beach,
 children buried up. D.T. thin & worn out but still unable to
 slacken off. D.S. takes things easier. 3 little boys? set 10 but
 too small to do the chores. Aft. tea & dinner were thoroughly a feast.
 Saw 4 who kept on arriving. Fr. Andam faring = T.B. Fr. Clement is
 fresh in whites, an instance of lantation. Lots came just to have their
 chest listened to. On the whole they look healthy. D.T. feels much
 out of touch & new methods & drugs & distrust her ability? fatigue.
 They call me? Doria Badana - the little lord of the sick. D.T.
 prefers to cook for herself, spend extra money on a new house for Fr. G.
 In evening we talked & gave her doses for sulphas. Bed at 11.

TAUPOTA - DOGURA

FRIDAY, SEPT. 10th

6.30 Mass Fr. Clement celebrating. Then I took out 2 to suffer both
 Lums in bad state. Some squalls in rain. Left St. G.

Dogura 12.30. Caught 4 ft 6 marked at C. F. E. M. at wharf by
 Fr. B. Pat, Miss Tehnial & Miss Lowmell. Hard to realize 4 in reality at Dogura.
 A beautiful place but clouded over & a thunderland of emotion.
 Fr. B. Miss Bennett Pat. I at lunch. Food surprisingly good & varied &
 quite a lot of conveniences. Openness of houses surprising. 4 came in
 Pat's house. After lunch saw 5 interesting snake-bite women
 haemorrhages everywhere in. Brain → paralysis. Clearing up
 after 12 days. Needs blood really, but no typing sera. Saw new
 Pap. Pat talked of conditions but with leave me heavy-hearted.
 Too few whites, & strong personalities & happy conditions. Natives
 friendly, some shy, but mostly co-operative. Fr. Oliver & Libbeter for
 dinner & are nicely nourished. Good to see D.T. again. 5 tried. Bed 9.30
 my feet & ankles swelling, otherwise little reason to heat.

SEPTEMBER, 1948

APPOINTMENTS

SAT., SEPT. 11th

DOGURA

Professional

Private

Left in 120 to pack. Saw Dispensary at work. Saw 2 under-
naked - appear to have small thorns here. In Pat is
so glad to have someone to talk to. Went to College.
Stanley, 1/2 c boy from S.S., was sick at Dambura to College
at 10:50 met all 7 B's 50 boys & 50 women wives.
They are a fine-looking healthy lot, & their singing
in chapel of almost unearthly beauty. F. B. said the
boys must be very hard. I saw the College but he did
all the talking just the same! Dormitory overcrowded
but that should be easily rectified. Dinner nicely
cooked & served by 2 students! then talk: sheep & pigs
in sitting room. F. B. killed 4 ft 6 snake.

Dogura District 500 sq. miles, has 2500 people &
population increasing. Men much better than
women? men get better food.

SUNDAY, SEPT. 12th

Woke 6 AM. English: to like C.C. Good many Papuans
there. Then to Dambura to relieve In Pat missing Stanley who
had developed a good old pneumonia at 3 AM. Signs
present in the middle & upper chest. Best signs seem easier
to pick up than in South. eg. Stanley, F. Andan, a TB teacher
here & a Wamira boy & probable TB. & a Potk.

Arthur L. to lunch & dinner. I talked to Laid of S.M.
& hope they understood. A charming speech of welcome from
a 14-yr. old in Wedau, translated by Griselda the Sec.
Best of better-wishing. Early to bed, still sleepy.
Have not seen an anopheles yet.

Boys arrange flowers beautifully.

Story: one woman attacked by another & knife runs back &
scalp slashed deeply & brain protruding from central ear on
skull. Pat sewed wound from 2:30 - 8 AM. & put her to bed in H.W.B. at 10 AM.
It was found collecting wood for a fire!

When Maltose and Malto-dextrin are indicated prescribe "Maltogen."

SEPTEMBER, 1948

APPOINTMENTS

POGURA

Professional

Private

MONDAY, SEPT. 13th

Started to make some cushions.

Stanley improving + temp down at 4 P.M.

TUESDAY, SEPT. 14th

Mrs. 6-30. Trying to tie up a transference for Mr. H. (snake bite) but no one typed yet. These kids are wonderful. Dr. P. & I to College, saw some students - Pat went. I talked to Eorans, Barnabas, Evertis + others. 15 minutes to Bernardine. Nice dinner + Cheryl's pleasant talk. Then F. B. talked of his boys + how close to the surface the surgery is, + how his boys sometimes honestly fight it. Some talk of diffidence here, + he promised always to give me the truth if I asked for it. Recanted back, at by 2 husky students, then Arthur L. who stayed to supper. Dr. White, Prof. McFadden + ~~Ben~~ their skipper here. Pat still going at 11:30. I tried to bound her off to bed. She can't keep on at the rate she is going.

SEPTEMBER, 1948

APPOINTMENTS

WED., SEPT. 15th

DOGURA.

Professional

Private

To Wamnia - Fr. B. 6:30, Mass at 7 - Cassie. Village is tidy, clean & attractive, Cassie's house is fresh & silver ward linen, & old maidish. The view from the living room glorious. 5 boys & 5 girls in body-guard to meet me. Mass most moving, 114 there & the singing is plenty & on the whole good. A few males in evidence older than puberty & C. is so much the one who runs the show. What she did in her fan in Ch. was amazing - fuss, fuss. Ypl she is nice. Back at 9. Off at 10 in the jeep to L. W. Mr. McSpedden, S. R. & went a most fascinating utterly beautiful run nearly to Laranai where the College used to be. Across river along the beach, the villages. People just crop up as we pass. A dirty old warria showed us a hair-ornament of salmon pink bird-of-paradise feathers. We passed the nearest spot where the Japs landed. Lunch, slept 2 hrs, Grand to dinner. Fr. Brady & Arthur, Miss K. - duck, sherry, quite a slap-up meal. Told them pictures - some rather odious ones from U.S. Wonder what the natives make of them!

THURS., SEPT. 16th

at 7 L. W. did's have lip hope it will be good. So rather stung up & paracetol not too good - being too short & pinned too small. The boat went to visitors at 9. Then saw pt. & manipulated Stephenson's leg under G.D. Washed head & clothes. To Donbina at 3, saw all the kids & examined them. Well cared for teeth good, some T's. As to come out. Full brothers may be one complete Papuan the other off white. Miss K. does things well, I think & feeds them as well as she can. Had to miss Evening as I was late. The J of St. M. had invited us to "take food with them" - quite a new departure, & they brought their cooking pot on to L's veranda & we sat on the floor & ate in one fringes. Miss D. sat on a couch & used a spoon. They had quince jam, banana sugar potatoes, pumpkin (awawana) cooked in sugar cane leaves & coconut. It strange but nice, if too filling. Jane is not nice. Then Equilda gave me a frangi wreath & some red beads (from Miss D.) & I had to say (Wedan foriana) "Egwala, remainin". Then they sang in Wedan & English one girl leading off, & the others chiming in. "Vi-Lactogen" with added Vitamins A and D. "I'll sing you one -" altogether charming. All in moonlight.

APPOINTMENTS

SEPTEMBER, 1948

DOGURA

Professional

Private

FRIDAY, SEPT. 17th

Walked to Wamira in the muck. 2 small boys escorting me. A pretty walk & not too hot. A sun of course. In fact all Qaria then a talk to Cassie who is fresh & enthusiastic. Saw no. of kids, 5? Looked over, some? Check, a pretty well nourished lot. They recited some quite good "Hymns" but don't know how much they really know it or live it. More singing in morning tea. The latrine system in the village must be fixed, as rain is poor. At Wamira it is pretty good. The jip picked me up, then En. & 2 pk from Wadan. P.M. 3 found another pyramorphis of irregular region. Babe of 2 lb. odd flourishing & gained 4 g in 4 days.

Barabas, Everhis. Roger came for Mohr's, rather short.

SAT., SEPT. 18th

Easier day. Pk all improving. Wrote some letters, slept after lunch till 4. Changed a lot in the Cathedral. Then En. showed me the Bp's chapel. He must be a poor lover of man. St. E. brought 50. Southern schoolboys back & 7. Peter whom I met today (Sun). M-K. arrived at P.M. & Nicholls family. Fr. J. dropped at Tanpota after all. Sister tried to get up but refused to release. M-K brought some mail. Fr. A.T. telling me I can travel when & where I please on the M-K, even to Lac. God give me wisdom & initiative for my job!

SEPTEMBER, 1948

APPOINTMENTS

SUNDAY, SEPT. 19th

DOGURA-MUKAWA

Professional

Private

ref at 5:30, minded babies while Mrs. M. went to church at 6, to the Wesleyan Sunday School at 7 - a lovely service, but rather long. The singing is good, but rather long 7 - nearly 9. B' fast. Freed Mrs. M. / ref. good position & down. Cx normal. Sister in a flat spin over feeding the mob. i boys few & unrivalling. Lunch at 12, slept for an hour. Sailed at 2, but the ship had not anchored till 4. & arrived at the station just before 5. I helped in dinner a bit. The rate of A.H. is M.O. The R. Papuan Constab. Band on board & marched & played on the deka-deka most beautifully. The fed a mob for aftn. tea. Evensong 5:30, i band playing hymns & music. Most of the Navy there. About 10 officers for dinner wh. was really & good. We shared a couple the Hosp. on had named. Keene interested in China I.M. & was P.W. in Burma. Berke Coates. F.B. showed pictures then gave the men drinks, we gave them tea & off they went. The gave Sr. some drugs & dressings. In A. talked till midnight.

MONDAY, SEPT. 20th

M. K. & M. J. family

Left 8 AM.

M. K.

Baranai

9:50

met

F. Anderson

& restles

active lad

I think

rather shy of women, never looks at me as he speaks. & positive & outspoken, would take handling I think. I like the Church & much, large in coral cove. Dispensary poor, but no wonder. Morning tea. Away at 11. He wants to build a Hosp. I warned him agst anything permanent on anchorage.

Dropped mail at Menapi but did not go in. Sorry to miss F. Conthel & in wood. Dropped little wainie speller from Darbura.

Mrs. M. & Ann sick. Tough crossing the day. Left for the Wain. got a launch snapped off Betty Billi (B. Vagel) but we got her again. Many boats have been broken up on the rocks by the up-hill just here.

Mukawa 4:30. People are plumper & perhaps taller, though some specimens have abnormally long legs & are thin - 1 village children, not Missin. Baranai is absp. Healthy lot, acc. to F. N. House mis. a lovely atmosphere. Thank God. all done up for Mrs. M. Use split bamboo for wearing walls. Church lofty, fine but roof coming to bit. a tabernacle over the altar wh. was Bp. Stone mgs. This varieg. of dark wood. The front & also pinnacles painted by F. B. New Hospital good, cupboards of fibro. Stocks of drug good. One case bronch. pneumonia.

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TUESDAY, SEPT. 21st

WED., SEPT. 22nd

Wed., Sept. 22, 1933
 left 5:45. Saw a bird in a meadow, chronic deer on hill 1 1/2 x 1. To come to Grove for
 graft. Mother will talk to father for consent. Took 2 of Helen's teeth out. Left 8:30
 called at Mainer for gun for roof of Sefora Ch. & took on the boys who collected
 I met Daniel the teacher, who looks intelligent. No live canoes & one outgunning
 used. Sefora 12:30. In a good & very beautiful. F. Newman, the school at
 the shore & they all gave me a bare for the Hospital by which the teacher
 seems sound, but has a homesick look. He is a Gona man. Climbed up hundreds
 of feet to the mission where has a glorious view & plenty of wind. Mrs. Newman seems
 to take life easy. F. N. Henry & had a pepinches. Thing discouraged
 the people do not respond, though they did to David Hand. Late lunch, & slept
 Evening at 5 in Wedan. Few there. Most of the people are heathen. They
 are almost sulky, & sullenly, though they respond to a smile.
 Good food distinct except for drought. Moses gave me a shot stick of nanger
 after dinner they danced for me. Dressed in leaves in a very fine look & much
 thin neck. Head-dresses of feathers, flowers or leaves. Dances all 4 ft. long
 Gills at each end & some sort of rattles. Dances in 2 lines & single
 formations. in perfect time & drums. Singing - melody repeated
 again & again. It got to U. B. that Sam & Bob before they danced. 2:30

SEPTEMBER, 1948

APPOINTMENTS

THURS., SEPT. 23rd SEFOA-ERORO. Professional Private

Well I am here! Left Sefton at 7-30 - some fuss: all the food was not ready. Slept in on the boat; 10gr bbls but too much for us! Arrived soon after 2. One Bay shows first signs of war I have seen - broken down wharves, mounds on two. The Wharfed was in so we had to anchor. Wrecked in bays for teeth, Mrs. Chit here of bad fingers. Th. Russell is different from what I imagined - good! Young-looking. I fancy he should be married. Jan looks well - the fittest of any women I have seen. Saw a p in the jeep, saw my quarters. The Hosp. Error is a mixture of poverty & plenty. Many shuff make it appear better supplied than other stations. Jan more lavish. Mr. Ashton is aft. tea. Evening in schoolroom as ch. feel down. Welcome bath, dinner late, & bed. Too confused for impressions, but the kids are all pot. bellied

FRIDAY, SEPT. 24th

I am more confused by Error than any other station. Can't get things into focus. Jan sits & says to life. It is hotter here than down the coast? a consideration for new Hospital. Unpacked at odd moments. I was here plentiful & one can get more from stores & dumps - dirty & sometimes in bad repair. These dumps are like a perpetual lucky dip. Got 2 more upboard in my house today, one for stores, one for reserves of medical equipment, which will be precious. Had a round of the p.b. - mostly wheels & I have seen several from childhood, 20 only had with wasting of whole leg - ankylosis in full plantar flexion.

The Hosp. is to good indeed spacious, upboards & creaks, supplies good - in some cases to good. I have an office wh. will also be Lab. Dispensary good, also O.P. Ashton is P.O., his kidie sick - overdone of Ca. I made it. Spasmodic aches pains, but T → 100.

Had 17 to dinner, men + + 1. 3 Romans. West work on dumps. Jan turned on a 5-cou^g Vi-Lactogen - the "Ready-Modified" Infants' Food. 134 The table was beautiful & fragrant. The adult women that she wasn't dressed when the visitors came. Th. P. made a speech of welcome. The boys danced. We drank & talked till 11.

APPOINTMENTS

SEPTEMBER, 1948

ERORO.

Professional

Private

SAT., SEPT. 25th

Up of tea in bed 7 AM. Spent most of the day unpacking, but there is lot to do yet. Jan raked out a big cupboard for reserves of instruments to be kept in my office, & a tin to keep reserve materials in, & a cupboard for shoes. The dumps supply an amazing variety of things. Mrs Ashby brought Lynette over - better but still shaky. Fr Dussell has a skin eruption of ? nature. Begins - blebs wh. break down & all skin looks thin - ulcerated area. Jan using Mercurchrome. The M. U. & Guild of St. M. gave us a N.G. kai speaker interpreted by Honoria, one of the nurses. We needed dinner after it all the same. Fr. P. put on Beethoven's 5th symphony & to bed. Am going to make my Hosp. office my Lab. Saw a firefly - green light in tonight.

SUNDAY, SEPT. 26th

Mass at 7 - nearly 9. B fast 9.30. Saw a lake & mud & ear forming just colossal glands - like mumps. T. only 99.6. Letters. Late lunch. More working. Fr Dussell came to have his leg dressed - improving on Mercurchrome, he & his friend Rod stayed for aft tea. Evening at 5 in English. Dinner & some more music. One of the med boys thought he was bitten by a snake but it was a false alarm. More working. Was was thanking for Jan's work & my arrival. Dinner interpreted by Mad Tegeha. Talked to Jan about holiday - Bp. has agreed to it already - in theory, anyway.

The natives will try to put one over you - the night med boy asked me for batteries for his torch. I referred him to Jan who had given me new batteries just 9 days before.

Legs & wrists & ankles using repellent.

APPOINTMENTS

MONDAY, SEPT. 27th

ERORO.

Professional

Private

Stephen bell 7 when a cuppa came. After Mattie got the boys to scrub upboards & open boxes & got a lot of unpacking done. Nick, Lab & Jeff &c. Jean & helpful & organize well. Adapting Hosp. to my needs. She is unpunctured but works on excellent meal. There is a refreshing atmosphere of laissez-faire here, so diff. from Sopora. Fr. Hand expected but did not come. Mr. Chuit's hands not better. Fr. Russell's truck broke down so Jean drove him home after Evening, & I went. Saw a dump-rushing metal & pile all inextricably mixed. There could be dozens of vehicles there & no-one suspect it. Growth everywhere & one cannot get an idea of the surrounding country. Some promising hills. Ground possibly good for a new Hosp.

Wrote letters after dinner, & Jean brought supper over here & yawned for a while.

TUESDAY, SEPT. 28th

Went to sleep after rising bell & missed Mass. Unpacking Red Cross linen (to an interested audience!), counted & distributed it. A terrific amount, plus other odds & ends.

A little language sharp, then Rod brought in his bag & on cut finger for sutures, which I did. Their skin is very tough, but they stand pain well. Jean went to the village for food, & I made up. Packed linen for Helen & Pat. Admiring a bit at night. Dinner is late & the evening is short.

The school children do a lot of work, in the house & keeping the grass cut &c. They drill well & on the whole look healthy.

A boy came in 5 years last night, my first case & unmistakable

SEPTEMBER, 1948

APPOINTMENTS

WED., SEPT. 29th

ERORO. - BARISARI.

Professional

Private

St. Michael. A.A. Mass at 6 in short session. 7 P.M. Left off at about 10 for Barisari 25 miles away. Jan had a mail at Embaga, as called to see if all was well. She had taken ph to Hesp. All things are well. Left, saw all native, many in the soap & Army chairs boxes or crossed river & creek by ford for horse or to broken-down bridge. Most Army cars are now useless, though the roads are good. Passed the dump in jungle going through, around Army vehicles. Passed Dobadua, saw a plane which had just taken off. Asked in village for food & sick people saw a bilateral hernia but the owner refused any help. One before nose affected & 2 little fingers wasted. At Barisari a sick boy was taken back to wood me. A high school at Barisari & native head teacher (WILSON) 3 pupil teachers. A lot of borobe (sifora) & dozens of pot bellies. 2 spleen Anasaria not works. Thrice refused - prob. jaw. Lunch on a verandah - very pleasant. Bought food & salty tobacco but poor supplies. Lack of rain. Saw 2 deaf-mute girls. Home at 6:30 a bath most welcome. Bed early.

THURS., SEPT. 30th

Unpacked Hesp things & as much of ambulance as is here. This is beautifully packed. Happier than it has been & glad to have a cold bath at B. Wensang in English. At Jan's hair. Late dinner, as usual Jan is under pressure but she feeds us well & a minimum of fuss & effort. 4's training. A Riviera a new cook-boy. To Russell, leg almost better. He is a very nice chap & a balanced mature mind. Saw Jan's friend's wife who is now coming good. Late to bed.

OCTOBER, 1948

APPOINTMENTS

FRIDAY, OCT. 1st ERORO.

Professional

Private

Mass at 6. Tried out Helen's microscope wh. is v. poor. Will not take the H.P. lens provided so the O.I.C. will be hopeless. Saw the 2 lowest classes of school children & thereby proof of F.P.'s excuse for not telling him first as "acting headmaster". Lot of pot-bellies, v. little anaemia spleen family large, not as bad as Parisian. Good many sores but few borboles, a lot of running noses but T's quite good. M. trichin pretty good. Mr. Athenian the D.O. from Hagarman, came, appears a sane kindly man. Mrs. Clint not well - T 100° & skin itching so treated as fever. Talked to Jean quite a lot about Hagar affairs. F.P. quite shipy at times, gloomy at others. Thinking about C.A.T.S. & inclined to refuse H.

SAT., OCT. 2nd

A sort of day off. Tested Deacon Remegies' eyes, but found it difficult even to him who can read well. Went to check burrows. Washed my head & tilted my head, put dusting on my antecases etc. Feel rather proud of my domain. 3 white pts in P.M. - Dick & Shobie's skin v. remarkable to be unaffected. In Doucill whose legs almost O.K. & Rod & ear trouble. 3 R.C.s to aft tea. Evening. Preparation in Bannister. The people for village. Cliph the policeman, Randolph the Ch. Counsellor & John Holman & wife brought up N.G. food for a gift to me & all sat in the lounge & ate it v. politely & plates & forks. Everyone waits for everyone else to take the unbailed but all went well. Then one dinner wh. was v. nice but had it pressed by the poorer "banned". Dick & John arrived at 8.30 dinnerless & Jean fed them.

APPOINTMENTS

OCTOBER, 1948

ERORO.

Professional

Private

SUNDAY, OCT. 3rd

7 AM. Mass - g. Deacon Remigius preached in Weston - many
 gestures. I think as keeping Sunday holy - & ambrase on the field
 with notes. Took breakfast saw a couple of cases & wrote letters.
 Slept after lunch - can never get enough sleep. Ashbros called at
 4:30 - kid still has occas. humming pains. Mr. A. going to look up
 Koro for us at Parisian. Fr. D. for his dressing. Evening & more
 writing. After dinner had Bach & Chopin records & recorded.
 Study of chi-asking goes on at meals but it is all more or less
 an effort. F. P. a moody bloke. Jean eat a little.

MONDAY, OCT. 4th
 Labour Day, Sydney.

Mass of St. Francis 6. Some writing before 8:15.
 Did a tech. round. Jean got good results from Tadoform on dirty
 ulcers & amylamine on clean ones. Saw a man & woman is
 being treated as such, though I doubt the diagnosis. Mrs. Chit in
 fronting & varach or something. Her fingers nasty.
 Saw school children at 11:30. A fine robust lot.
 Slept after lunch. Fr. D. had the Lays here for treatment &
 aft. tea. Went out in jeep & Jean to buy food & she let me drive
 back - hilarious with every kind I shall say ran the car
 over a ditch - a very easy thing to do. Back at 6, bath &
 sponged Mrs. C. Hot night.

OCTOBER, 1948

APPOINTMENTS

TUESDAY, OCT. 5th

FRORD.

Professional

Private

Slept till 10 to 7. B' fact. saw sick pt. only. Waiting for mail & saw more kids 10-14 yrs to bony. A few canons sent. M-K came, Mr. Hubble arrived 4:30 plus a lot of my baggage. Still some missing, viz. batteries. Lost med books. F. D. came for dressing & brought a mission box & T.B. Brother out Jean's hair & it is like a boy's! Letter from F. D. asking me to go up after dinner. Mr. H. told us he is still up & down from his bed & is sending a radio for the Miriqui to call if possible. Took me up & talked Hospitals & construction generally. Then Jean's. I got to letters as the MK was to sail at 3 A.M. Got dinner & off to Pat's Helen's & Helen's gramophone. Mr. Clint got rather neglected. She is better but gets up only in the P.M. To bed just before midnight. F. P. drove Mr. H. to the wharf at 11:15. F. P. goes silent when other are talking & does not offer much that is constructive to any conversation.

WED., OCT. 6th

Sent mail to Hig. before breakfast & mail came just after Mother, Geo. Rae & Allan C. It was so good to get them. F. P. went to Barisari. I saw an acute iritis & engorgement of retinal vessels. - one of the teachers, unfortunately. Finished the school - the senior classes a fine lot. Unpacked. The R.C. party came to dinner & Jean had forgotten they were coming. Dinner was set for 3. I think F. D. unexpected. They brought drinks & also left some acceptable snack juices. I like F. D. so much.

APPOINTMENTS

OCTOBER, 1948

ERORO.

Professional

Private

THURS., OCT. 7th

To Mass at 6.ounds in Hosp. took quite a time. Th. boy from Kauai in - a hip it seems, not I think T.B. or Puke's. Doing a warbird. One spends a lot of time fiddling round here. At 3 did my first O.P. - Jean gave the GA. Scraped a nasty ulcer, dirty, sloughing down to tendon. F.P. took our photo Jan. in the 1st & 2nd in nurse. boys & 2 girls in theatre - rig. Mrs. Clint better, sitting on verandah. F.D. arrived as we were at apt. tea & he. Did his Hb - 93% looks 50%. Am using & sewing my own Telly lamp which makes for greater convenience. Dried early, & Jan. I sewed all the evening - girls' skirt. No Meringue yet

FRIDAY, OCT. 8th

Mass at 6. One of case cheerful, no bleeding. Did some warbird tests & opened an abscess in wing. L.B. Nearly finished unpacking. Slept after lunch over an A.M. to work to see Th. Driscoll arriving. He brought 2 U.S. Army or Air Force men who are looking for war graves. The taller & senior man looked like a good specimen of responsibility. Father (!) turned on a tuffa hell from turned up. The men say that they can find graves only if the natives remember - crosses or rotted or burnt away. One "body" was found on the ground & U.S. Army took. They landed from the plane we saw last week. Showed them the Hosp. I messed up. Broke my Telly & Jan spent nearly 2 hours fixing it for me, quite cheerfully. I found her limping from a rusty nail, no dressing. Had to force her to let me see it. Gave her some ATS some skin reaction, but she took it well.

Nestlé's Malted Milk is fortified with Vitamin B.

OCTOBER, 1948

APPOINTMENTS

SAT., OCT. 9th ERORO.

Professional

Private

No Muringi. Some unpacking & tidying & a mass of visitors. Got sick of them in the end. I suppose Jan too, but she does not betray it. Bell, the P.O. from Tupa for morning tea & lunch the Athenians, Ashburn, & AC. Corp's Dick. I like an Athenian, but am not sure abt Mrs. A. - pretty slow in the uptake. Mrs. Blunt over for meals for the first time, & brightened up considerably. I thought I had seen the last of F.D. but the boys asked us for a picnic. Mrs. A. most thoughtful & arranging for me to catch the Muringi on Monday at Killebrew. F.D. finished his heretofore packet. As far as I can see it is fine but has some ugly solid looking clouds behind the Cross they may be angels! Jasper & Edgar back from patrol; Jasper seems to be intelligent.

SUNDAY, OCT. 10th

Mass 7-9. Saw some pt. Set off for picnic just before midday - a glorious, completely joyous day. Comfortable in the truck in spite of the jolting of the road. Belm chairs, 4 D. or old car cushions, hot drink. To the bay then up the old Army Rd over ridges & more ridges, & a few steep down slopes. Good view of the country, all mountained round the Eroro valley. Jungle & blunt-topped hills clear of trees. The road is bad. I found some gum trees & got some slips to plant. Drank coconut milk. Down to Eroro creek down a steep hillside, no road visible for grass. Staded across in bathers & stayed in sun. A delightful picnic. I couldn't swim against the currents. F.D. & Rod had to rescue me. Set at 5.30, from height saw a boat in sea near on her - Rasfahin. Saw fireflies in dogs. All came home to dinner & sat down at 8 PM. Jan had her big lot - only an abrasion. F.D. will be gone when Graham. ~~Monday~~ came in Stella Maes tomorrow.

APPOINTMENTS

ERORO DE WADE

Professional

Private

MONDAY, OCT. 11th

up 8:30 & busy accomplishing little. Fr. Puvent off on patrol after a lot of fiddling. We had to open a guil' beast at 8:30 under the table! It came up to a head & quickly got wasn't flushed yesterday, or only at 22. Only 14. & can't imagine how it has arrived. The beast in the air. Mr. Asaka brought food for Fr. Lill - these people are generous. Set off for Sefuta 11:30. Mr. Bell joined us. Picnic lunch, Sefuta at 2:30 & got some mail from the D.O. - thoughtful men! Sent Horace ^{to Sefuta} back to Sanguara. His wife Hannah has a lovely face - much like F.C. who is more like Grandma than I had expected. Has bad hands & feet for Jan to look after. The D.O. brought Mr. Graham & me to Killebuck & on board for double canoe. Capt. is a Norwegian, plump & rather big, & has given me his cabin. Killebuck at anchor tonight. Slews tomorrow.

TUESDAY, OCT. 12th

At Mambabaka. Funny life on board. Left Killebuck at 7:30 & then rather rough. Mr. Graham stayed in bed. I wrote letters & talked to the skipper about Russia, China, Norway & the park. He tells some good stories which may be true. Lunch. Then we anchored here having passed Sefuta. Everyone thought everyone else knew more about the place & where it was. A Mr. Chester who lives alone here unloaded the boat & took us ashore & I looked at this village. Rather an ill-considered lot but this is the off-
 here for the gardens. Dressed & undressed, saw a bath & had your shoes washed. Won't come further than Sefuta. There is a church here, rather a poor place. Fr. Lill visits at times. Forgot to explain to the people or even Mr. Chester who I was! Delicious fish for lunch. Dinner caught in net. Talk in after dark tonight. Go back to Sefuta in AM. Have a cold.

OCTOBER, 1948

APPOINTMENTS

WED., OCT. 13th

DEWADE

Professional

Private

Arrived here at about 9 A.M. & anchored in a little bay & shallow around F. Gill came out on a big canoe & was so glad to see me. We came ashore & the food that brought. The place is a very pretty spot, on a hill above a coral-floored clear green sea. House large, & native style, & comfortable but too hot. F. I. showed off his place, workshop & beautifully made fittings - all from scraps! Lunch at 11:30, then I examined him. Under-nourishment is his worst trouble. Saw some sick people & kept them up for two. F. I. decided he could not come, so I decided to stay & "look after him". He wants me to order meals &c. Collected my baggage from the ship & said good-bye. Even sang. I sat on the men's mat by mistake, but he welcomed it. F. I. is a very sensible man, & I fancy has fear of the virus one not expect from a man living alone so long. I find the natives' English is poor, even Susannah's. Much talking & listening to news. F. I. has plenty of books so I may get some reading done, also language.

THURS., OCT. 14th

Woke at 6:45 in Binandere, started for me by flies on my legs & 1920 service & beautiful. The Ch. is square, the Bp's chair behind the altar. Cuffs, then to fast. The Rummy had an attack of constipation & shallow breathing pulses \rightarrow 120 & a bit rocky, no cyanosis. Lasted at 5" min. He says he is eating much better & feeling better since I came - the same, I think. Dispensary all A.M. Rummy in charge & trained for 5 1/2 & 1/2. He is good within his limits. We don't understand each other well. Saw Grade III of the school - everyone age from 5-16, one girl & a babe. Not well-nourished, teeth & bad. This big spleen little anaemia. A lot of boro. Making an inventory of the dispensary. Bath at 4, evening walk up the hill & 2 boys learned some words. Dinner, then talk & moveless. The people come in & talk over problems & he welcomes the beloved Susannah & her babe - her husband is in jail for indecent assault! Bed at 10. F. I. is indeed a father to his people. The midday heat is greater here than at Ebor, night cooler.

OCTOBER, 1948

APPOINTMENTS

DE WADE

Professional

Private

FRIDAY, OCT. 15th

Mass 6:45. Morning in Dispensary working re. F. I gave me a copy of Alice, wh. I have not read as an adult. He offers me for 100 much reading matter & we are apt to dip into things & then off into discussion. Lot of our views tally eg. we need to cover our heads in ch; the possibility that intercourse before marriage is not necessarily sinful - depends on affection; & lot of little things. Finished Dispensary in P.M. after a rest & reading his booklet "Some Moments of Last Year". It set me off thinking of & realizing the importance of training natives, even if slow it must be thorough. Missed Evensong; my bath was late. Walk along beach; Reginald learning his words. It is a lovely spot. In evening Angela got a sore leg - myositis. Took her Plachies & Sulpha.

SAT., OCT. 16th

up at 12:30 to Angela & again at 6 & missed Mass. She had a lot of pain but it cleared through the day, also an attack of fever. The leg has subsided. Saw the Teachers' babies - must do something about breast-feeding to 2-3 yr-olds. A lot of yaws. After lunch some reading, then Susanna took me swimming. She Mary, later her brother's sister, & the babe went in the canoe for a couple of miles to a sandy shallow spot & we all swam in. The babe. It was glorious. Two parks & brass. My language lessons go on apace. S. is a good teacher. Dinner & some typing of the inventory & sewing. Many visits to F. R. from his boys for all sort of requests & discussions. Then we talked till M.N. about mission policy & on to my vocation & showed up my bad joints badly - eg. my phobia of housekeeping & shyness to project it.

OCTOBER, 1948

APPOINTMENTS

SUNDAY, OCT. 17th DEWADE

Professional

Private

Angela better. Mass put on early. I was hustled to be there in time. Short sermon. The Agnes sang as well as some hymns. Attendance only fair. Mrs. Chester arrived just at the time. The mail & I full of joy, but went again. A slack day. Left after lunch then wrote a long letter to D. Buckley. Fi. finished my trousers which are a good fit. Rather hot for here but otherwise good. A dreadful yaws baby came from Manaw. I fortunately can stay in friends to have treated Rhoda came also from Mambakuba. Fed up for some days of her ulcer. Evening, more talk in the evening after a late dinner. Wrote to mother & to bed. Lillian to aft. Ha once more, but her tale still will not come to me.

MONDAY, OCT. 18th

Mass & Mattins before it & a bidding prayer almost amounting to a sermon. Special intention for Fi. Lill's and of our Assoc. in St. Luke's day. On my part also for Joe. Lovely service. Fr. R. becomes a stable as a priest. Mr. Priestley, a planter from Tona, arrived to see Fi's workshop. Lillian lot & only 2 themes, the uselessness of the natives & his food fads. I think he stopped using his brains years ago - it was his temptation up here. He went after lunch though he wouldn't have any. He took a mail from I washed my head & gave 2 to N.A.B. - their veins are to waste of Southern ones. Rhoda jibbed & refused to have her leg done, so Fi sent her to the N.M.P. at Tona. Wrote to Joe, read a bit. Nice dinner & finished & put again & on occasion. Reading H.B. Wells. Saw a letter from Lill to Dorothy Lays & her reply. Rain pouring down. Hope Fi is fine for the dance. Fi Lill still keeping better. Wore my trousers today.

"Vi-Lactogen" babies are not troubled with constipation.

APPOINTMENTS

OCTOBER, 1948

DEWADE

Professional

Private

TUESDAY, OCT. 19th

A happy day for F. G. I. His 20th anniversary. A good number at Mass. was "High" in the morning. A happy service breakfast table then went to John H. many preparation for the dance, to which we went at about 11 P.M. - a lot of dancers at 3 P.M. The first lot under Mammil who was a solemn M.C. Some lovely head dresses, new & old, some crude; lots of coloured calico worn from the head or shoulders: short calico & grass & leaves grigling waist, legs & arms. Red, white & brown paint on faces & throats. The "bini" had a minor part in old dance dance clothes, like a swaggy sarong as a clown. They were trying to put telephones up on coconut trees, & the P.M. ones lighting a fire in mine. The dance are effusive: a little singing. Rather comfortable figures & personal ships. The people gave Fr. 2 chooks: a lot of 5 in each: he was quite touched. He gave the kids sweet. No "bonds" but he gave a bag of rice. They all ate together. Missed everything of that type. Prob. antibiotic condition - Burns & intelligent about giving an enema. E.g. has a complete permanent tear. WED., OCT. 20th
no children. At evening Mammil spoke of Fr. & service. Chook & then preaching for dinner in Brown, beer & brandy! Quite festive. Fr. showed pictures of a project, then we talked of policy. or. all the people had a something on the beach to discuss medical work: their duty to help.

A busy day & people a bit tired after yesterday. I fear I draw poor Burns to distraction. I am feeling a bit of premenstrual strain. Mass as usual: intention for her & her latest project. After lunch an old screener came, can't find much trouble but? singular & he is convinced it is concerned as Fr. I. says. by Mammil! He refused to cough Eros for machine & I got poor Burns to preach at this while I prayed (C.B. too) for guidance. Finally I got the inspiration to make him walk instead of being carried on the stretcher & walk he did! Also saw Ambrose, grandson of who had worked in Mammil. M.H. arrived at 3, & lovely mail. Returns South in A.M. & 4 months to, to my regret. But Fr. I. "Lactogen" contains added Vitamins A and D. is much better. I have asked Susanna to look after him as he will not come. Last Burns a bit of fever. He is a good boy.

OCTOBER, 1948

APPOINTMENTS

THURS., OCT. 21st DEWADE - ERORO

Professional

Private

To shipped mass. called in at 5. a supper then off to the
wharf. Everyone there to say good-bye. Sorry to leave Angela
& Ethel Joyce on board. Good trip, very calm. Picked up clothes
from Killebra, saw Ruana beach of the martyr's memory.
Wrote letters. Arrived 2.30 & the ship came in from, mostly
Helen. Good to see Helen here. Up to house where the bunch
were; quite a collection of visits. I find the place
noisy, unrelaxed & too busy & other concerns to think
enough of its people - but soon will absorb with the atmosphere.
Helen told me of her death wish of on a mid & a
death from tetanus last wk from kid. Unpacked, wrote
letters for the M.K. wh. sailed at M.N. Ordered blue cloth
for uniforms wh. will be to mid if adopted universally
a white cross on it probably. Gil nurse? I don't like
Pai's aprons.

FRIDAY, OCT. 22nd

Busy day - fairly did a round - Angela's 14p 54p.
Unpacked & sorted things. The others went to Cook
house for all her (under pressure) but I jibbed &
said job here. Both & Tuesday in place of the other
invaluable. Dina & Helen came in talked about
equipment to ask advice. An upset between
Graham & his wife who was trying to run away. These
people certainly are highly emotional! The 10-11
madly proud housekeeping & doing it well. I
can't focus on her yet.

APPOINTMENTS

OCTOBER, 1948

ERORO.

Professional

Private

SAT., OCT. 23rd

Muddled day. Upacked of table which is in mail, & all complete & in situ. Tried to extract a tooth but Anson, unsuitable for me. I suppose my lack of skill prevented. Am feeling oppressed & having so much to cope with & not having a grip on things. Suppose I'm trying to run before I walk. A blessed rest came in in the after. Bath. Evening: to the house warming given by the boys on the beach. Very pleasant. At what I think was bird of Paradise. He was casting a blind eye at the feathers. Fine of 72. Raining but got home dry in Rod's truck. F. P. got back in time for the dinner.

SUNDAY, OCT. 24th

Not so disorderly in mind thanks to Mass. Raining hard during service. F. P. preaches it lengthily. Godwin & Aguirre. Looked for amaranth: found only 1 chest for certain. Took a lot of AM. Got letters to Mother: W in off by Helen. She & Fran left at 4 for Sobadaya for Helen to catch a plane at 7:30 AM tomorrow. Rod: I rest for dinner. I trying to decide if I should help: I keeping. I am certainly going to dodge some of the society. But most of it is going soon. As I was praying for guidance, a woman came in & fast. From, caught by being backed by her husband - a day ago. Had a temporary afflict & read up P. P. bright. The husband is an ex-conv. Murrell & Ian - has 3 wives. Am in charge of Hospital tonight & learning a lot about it. Just killed my first snake - a little about 1 ft. long in my bedroom. Hope he is dead.

OCTOBER, 1948

APPOINTMENTS

MONDAY, OCT. 25th ERORO.

Professional

Private

up at 4 to 6 to Hosp. & to Mass. At Hosp. nearly all day. Jean not back as the plane is delayed till tomorrow. There up too possibly as we've had a lot of rain. Had tried to go after her but couldn't. So I've been in charge. Couldn't get all the things for the machine esp. strapping, as she is still not home. Looked at hookworm over & showed the boys (Ethel Joyce's spec) & did a round. Very hot. Looking up fractures & hips - Louis an extra abdominal lesion? enlarged glands. - I slept after lunch. Have lost some sleep lately. Mr. Atkinson came & gave me some cigs. He saw the fracture woman who won't lay a complaint, so he will try to get the husband on some other count. The Grahams' Gypsy have gone. We had a dinner - accumulated neglect - a lot of chaffing. Complained the med. & bed early.

TUESDAY, OCT. 26th

up too late for mass, after I had been to Hosp. so prayed my house. Double bet. down girls & school teachers. Leah & Frances slept in Blake's Charles & another girl spent a morning & F.P. asked M. & me to be there a horrible business. I felt we have no right to bargi in on them like that esp. as the girls had made no promise. A man brought in litter by a baby crocodile - 3 gashes on Ray & tendon of ~~ext.~~ abd. pol. lingers severed. I think a lump litten out. I could not find the lower end. F. had to give the anaesth. & did it well. It took over an hr to do. Jean arrived after lunch. They spent last night at Lays and glad Helen saw them - she got a RAAF plane today. Good to have Jean back. F.P. came to talk over the sins of youth & decided to help the girls. We hope he'll change his attitude before AM. Anyway no action yet as the D.O. came & occupied his time. To try to bring but Nestlé's Malted Milk is fortified with Vitamin B. 150 vanished some books & talked to Gram.

APPOINTMENTS

OCTOBER, 1948

ERORD

Professional

Private

WED., OCT. 27th

up for mass. station upset about the trouble - a general stir in the air. Gents are sent to village for 2-4 months. F.P. after persuasion talked to them. They came to Jean for comfort. I think S.P. has the request area had to deal with them. The boys have been talked to but must be reported to A.T.T. Jean & I did the packing - the baby - put in 4 P.M. Angela - all clear. Mr. Atkinson came & asked me to see him then got confidential about the S.M.A. at Hig. Stayed to lunch. Had: Fred kept tea & are going to fix the ambulance, bless them. Rod seems to be smart & maddy. The station has resolved to be furnished for meals - dinner at 6. Thank goodness. Have finished the rest of my books - written to Linn. Still tired.

THURS., OCT. 28th

Slept till 6. a long boring day in Hosh & worse for Jean. she must wait on me as well as do her own jobs. Did a round; the croc. man's arm good. Had trouble & Elyah's answer. - he got things among other things - but went away by 11:30. Then by God's grace I got a tooth out & hard work. That took age. Then L.A. extra thing with went well. The whole after an extensions, improving. Jasper is a good guest & intelligent. F. Beney taught him carpentry too. Jimmie's animal has hated books & heard more of the upset from Jean. The girls have gone: the 2 teachers shamed, more by their furnishing than their crime & maddy helping them to win back their self respect. Charles had to report to me at 9, so I encouraged him to sit & talk to Jean & me. He stayed all to be. We won't tell S.P.! Then the night on by Day came in a quarrel age of Jean's hot temper - probably justified in my opinion.

Use Maltogen in place of sugar on cereals and puddings.

OCTOBER, 1948

APPOINTMENTS

FRIDAY, OCT. 29th

ERORO

Professional

Private

An easier day. Late for Mass. F. Clint started early. Worked out hard to get the still. Angela's Hb still 5.9. Wanted to P.V. Ethel gave but she is menstruating. Talked to Jan about gardens, food policy, etc. She has done wonders. Am getting many books & belongings in order. At 3 we went to the dump & a dreary waste of nothing metal, but found a few things of use. It was so hot. Got back at 5 to 6 & found the D.O. & Johnny Miller here. He is a bright lad & looks nice - Look G. up. The D.O. brought mail - Mother. Got H Palmer. They also brought steak & they, Hubbs & Wheeler gave us to eat dinner. The steak & onions were so good. The D.O. talked about H.F. Murray & the old day. Jan & I talked to Ezekiel. The Clint go tomorrow.

SAT., OCT. 30th

Must be brief. The Clint went. Poor Maddy got word that her mother died on the 27th. She has taken it well, but so sorry she didn't go home while in Aust. Have organized my house, cleared away packing cases & unpacked the machine. Mr. Hubbs came & is to take me to Langara tomorrow W.P. Longest packed & got things ready for travel. Violent thunder - a wind.

OCTOBER, 1948

SANSHIVA-2

Private

SUNDAY, OCT. 31st

March 1st at 9:30 AM. The H.C. "Atlantic" leaving Trip
Thompson & H.C. began the run. H.C. arrived at 3
H.C. landed at
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NOVEMBER, 1948

MONDAY, NOV. 1st

Bank Holiday, Tasmania.

up at 5.30 for All Sts. Mass, sung in Sangaran
Widan beyond - For all the Sts. & up water. up holy ones. I felt
a bit faint for some reason. Spent the morning examining school
children. They are thin & teeth bad, but skins good on the whole.
I am to visit & get inevitable - everyone - & I sleepy. It may
be humidity but doesn't seem humid. A mail came, I
lay down after lunch & read it - Mother, the Bp. & two offers
of help. Then saw 1/2 the Wandys' School boys. They were
rather embarrassed at being looked round by a woman &
some are men. Evening, bath & wrote to Mother. We had
a 4'6" snake in the bathroom tonight. The boys killed it -
quick. The chick went at about 10. I had a talk to F. Hand:
he has some sound ideas of self development for the Papuan
& self expression. And now to bed.

NOVEMBER, 1948

APPOINTMENTS

TUESDAY, NOV. 2nd
Cup Day, Melbourne.

SANGARA —

Professional

Private

ISIVITA.

all Souls. Lovely Mass in quiet cemetery, & all the singing
from 6 - 7.45. DH is a v. able & wide chap. He wondered
if the people wd be too superstitious to turn up but there
were 74 communicants (40 odd school-boys). Wrote about it
to Mr Ash. Hope he can use it all day looking at school-
children, also Peggy's. My. Have come down to Xian roads,
thanks to. Peggy is a wonderful person. Sgt Smith came
before lunch. I like him. After E. writing & bought too.
The boys having chain practice while I tapped. They could
make fine chain.

WED., NOV. 3rd

Mass celebrated by Fr John Lamberson. Saw M.S. boys till 10 past,
& then on to Primary School, & got a bird of it. Refreshed by a rest -
don't know why I got so tired so suddenly. Looked at the kids &
good in the whole. Lunch, then packed to come to Isivata. Peggy, Fr. Sept.
I came in the rain up the famous Kokoda trail & at each end
along a crazy trail across numerous rivers. Glorious country
but difficult. The people here less sophisticated & much
more friendly. The ^{white} girl Good boy at F.S. whether he is young or
young. We saw men practicing drums & shells for a band.
a weird organ-like note produced. The chicken is real - the
same house that Fr Holland had. Peggy & I rooming together. I
like her. Fr. S. a friendly solid soul, but has not the thinking
power or force of personality. Fr. Hand probably more lovable.

APPOINTMENTS

NOVEMBER, 1948

ISIVITA SANGARA.

Professional

Private

THURS., NOV. 4th

Mass at 6.30, to fast, the saw kids all the morning. Some are scared, they tremble. Their hearts pump along too fast. The little kids are too thin, the bigger ones are fine. Teeth whole but discoloured, not as bad as Sangara. I manage most of the phrases but my brain gets tired & refuses to act. Late lunch, then tooth extractions - the kids are good. Late aft tea. Have written to Lil. The cook boys are good. The people are friendly. I stopped to look at a baby, had an audience of 20-30 in no time. Then went on to the small house. They shrieked & mirth when a chook flew out at my approach.

FRIDAY, NOV. 5th

A busy day. Sunday 6 days in. my goddaughter. Bought a new bracelet to send her, & remembered her at Mass. They day. saw loads of children also. Elected the head teacher who has a peculiar rash rather like psoriasis. Some children came from Sumbata school saying that the Govt were sending them to Hoof, they obviously didn't want to go. They said it was on account of eyes or teeth, which were quite sound. It appears that the eyes were examined for anaemia, & H.W. was the diagnosis that they weren't particularly distressed by anaemia. So I sorted the sheep from the goats, & it delayed us so that we left late. Then we departed amid cheers, waves & smiles. They are so friendly people. We know the Govt was at the Real House & some Sas people. I met Mr. Benka, the new man & we had a most pleasant conversation. He was at first a bit hostile & later more or less subservient. I prayed for the right words & hope they were. Now we need medical boys trained! 4 boys at Isivita offered - grammar - little perhaps? I told them to "Vi-Lactogen" with added Vitamins A and D. Thank all. I. Lucky trip back, arrived at 6. Wrote letters, asked for Review, & on to the river all the morning.

NOVEMBER, 1948

APPOINTMENTS

SAT., NOV. 6th

SANGARA.

Professional

Private

This appears to be a day off on most stations, but Peggy was kept cooking for the "do". I slept in till 7, & appreciated it. Then wrote up Iain's report, quite a long job. I washed up & tried to keep after lunch Nancy. I did the accounts, a tedious job. People arrived about 4 to 4.15 only stayed on for about a dozen of them. The aft. tea was nice & the room as pleasant as it possibly could. Mr. Keenan and not Mr. Lucas. He wrote an answer to my letter, pleasant & a real warning, & invited me to aft. tea & to see the Hosp. I continue to like the D.O. so much: Hosking has a nice face, but Conahan not. He is unable. The others I didn't see much of. The Murphy's pleasant, brainless. They all went before Evening, he was quite provoked. He loved after that a bit of language & read magazines. To David busy translating the Gospel for today. He never seems to tire. To Syd. stayed. To John went to Iain's. The latter effected a reconciliation but Ethel & his wife.

SUNDAY, NOV. 7th

Mass 7-8.45. A 1/2 hr sermon from Fr. David in Brokavira. Very nice service. But a bit too long, in a foreign language. The D.O. & Mrs. D.O. were to come at 8.30 but didn't. B. fast wrote letters. Everyone relaxes on Sunday, & it is good. We all slept after lunch, then I washed my head & went to have Hosking for scales. Aft. tea, the Mr. Thabbe arrived from the M-K at Orkney & mail. Evening, the read most of the dinner. A few letters, & coachal mail. The Thabbe are going to Mukawa for a while. For the evening, purchased possibility of pumping water to the Hosp. & Syd. should establish. Wrote letters till late. To David talking of walking bank. & of Sofia. He went in 22 evening but lived in his fashion & seemed to know his companions. Got a hungry though.

APPOINTMENTS

NOVEMBER, 1948

SANGARA

Professional

Private

MONDAY, NOV. 8th

Mass at 6 English, special intention for the evening Charles. After I fast talked to both schools about teeth hygiene. St. Jo in 2 hrs is an interpreter; Manly in one 5 interpreters. Mr. Thibault got off, didn't leave my letters. Ben & me off to Kilderton to unload the M.K. The D.O. sent the jeep for Mrs. Lane & me & we went there for lunch - & pleasant. The D.O. took me exploring & whispered of a possibility of ~~but~~ ^{valuing} available Endo Ck as a Hospital site. Saw the office, quite pleasant & spacious & to the Hosp. Best facade on view & no controversial subject discussed but there is a depressing emphasis on Mr. Lane & all his works - & his ambition to make himself comfortable. There were hundreds of ft. - I don't think I let my previous knowledge deceive me: they look useful, futuristic, but slanted at us. The house for a moment, not official as far as it goes. Then saw the S.M.A.'s finally. Made hotel. There must be a glorious view from there.

Home for a bath & to a party in my honor. TUESDAY, NOV. 9th
pleasant, I enjoyed it a bit more. A good buffet dinner & no one got drunk - except before they came. We all crowded into the jeep to come home.

Lane. Slept in till 7, saw some adult ft. including poor Wabel who has lost 3 babies. Took teeth out, a depressing business. The men still away on trucks & jeeps. Slept after lunch; at 3:30 the D.O.'s jeep called to take me up there. I like the driver, Norman, presumably Xian. Examined Mrs. A. B.P. ²⁰⁰/₁₁₀. Walked back. The boy in for surgery this evening & I writing. Ben Chitt ill again, & it looks as if I'll see a lot of her. To David: I have some good discussions. I like his train & I think he likes some of my ideas. Sybil is much of a boy & I think likes Helen & much. Peggy is an absolute dear & Mrs. L. sweet, kind & simple minded. Nancy takes 100 words to do the work of 2 - maybe I see myself reflected in her.

NOVEMBER, 1948

APPOINTMENTS

WED., NOV. 10th JANGARA -

Professional

Private ERORO

Marshall Is. Fr. Sybil celebrant. F. P. assessing. Appointed this week end Dispensary boy. Packed & D.O. sent for mail 8:30. + 4 Tairua kids. Left Hq at 10 & arrived here at 5:30, & turned all over the place. Mr. A. let me drive from Pofonde to Lofaka. Held up at Lofaka & Lumbaga crossings. rivers swift. Lunch at Red House on road & Arriving & went glazing aeroplane parts. Found 7, dog, plane nothing in one spot. Also inspected Amels. All Robadina found that a woman was prophesying bomb falling everywhere & the men had all gone back to find shelter. The D.O. knocking the two boys. He is a dear. He has helped in all sort of ways. Suddell's quiet. They came to dinner & stayed late. all well here. F. P. away. Charles in further dispute & he & Blake in rebellion. F. P. seems to have had concerns abt the affair & venting it in being officious.

THURS., NOV. 11th

Armistice Day, 1918.

up at 7. Hospital closed, but removed Tairua Kestlin to mail, & started dispensing & slow at it. Fr. Sybil arrived at 12. After lunch he Jan. I went arranging in the stores in S.P.'s absence. Got a helmet for a W.P.B. & sundry odds & ends. Still more machines then Sybil helped me fix my goggles & fixed the serial. Heard St. Paul's Evening for church, & item. Evening here late, then the Stella Maris's skipper came to dinner & brought the 2nd engineer - some wine in his belt - I drank & clunked out into those Achilles. A G.A. took hel & but it came out & missing thank Heaven. Miss last. Our guest brought stayed hotel - 3rd night remaining for these girls. I wrote to Washin via the S.M. to Cairns. Dropped my typewriter but Syd. bless him, mended it. F. P. not back.

APPOINTMENTS

NOVEMBER, 1948

ERORO.

Professional

Private

FRIDAY, NOV. 12th

Mass at 6. Fr. Syd. Dispensed for him - am a slow but I expect I will get the hang of it. He fixed my cupboards & looked at the old Army tank. It could be fixed if it were worth the time & money - depends on where the new Hosp. is to be. He went after morning tea. Fran got Anne busy on putting up doors to the Lab & fixing the stand for my printer. Also got 12 ft to dig some garden! Her ability to get work done is amazing. I worked on the Southern order. He started a Bible class for the med. boys in the evening. I went over for Complaint with them then I & I talked poetry or Fr. P. recited in the after. He is left more & more out of courses - or perhaps he leaves himself out.

SAT., NOV. 13th

Shift till 7. Did Anne's bc & more of the order. It is tedious when one doesn't know the ropes. Rearranged my house, & my former bedroom to be a workroom. Don't know where to put my crucifix. Don't unless I make the workroom also an oratory. The wireless stations seem to be off the air lot of the time. Rod & Fred came at 3 to do the ambulance. They put it together & quickly, but trying it out took ages & alarming noises & blaks. Rod himself was a bit scared too. Finally it worked & sterilized a couple of drums. It is a noisy even when going properly. Meanwhile I got the shell going at last & got a couple of pint of aqua deal. The job took till after 5.30, so the boys stayed for dinner. More order in the evening.

NOVEMBER, 1948

APPOINTMENTS

SUNDAY, NOV. 14th ENORO.

Professional

Private

Wass at 7, B. Remigius preached for 36 mins & on advent a week or so too soon! Hot & humid & everyone tired. Mostly not sleeping & some frequency but will not count to me. Have tried up & written letters all day, but accomplished little. 2 mails in - Rig & Melugini. Am so glad to get mail before I go south! Violent thunderstorm tonight, which ended at 8.30 & the boys began practicing their dance. To I went over on the stroke of 9 & a force of thunder effectively stopped it. Paris upset & I am not. I guessed what was up when I saw him go over. Was sorry I wasn't there, but maybe it is as well. It is hard to tread the path of fair dealing; but the course here seems clear. I saw Charles today & he is quite keen to do my plank. Am so glad to be in touch with him again.

MONDAY, NOV. 15th

A day of battles, & general wincing of a long arm. Very weeping & not very good at all. Got to sleep at 1, up at 7 & missed mass. Told him I would not have been interfering in their affairs. Pouring & rain so no school. & Mostly had a holiday. I have made some attempt to get across to each other. After morning tea talked to the boys about C.R.T.S. & after lunch got their opinion in favour of it. Then I was both disappointed. However, later Kipling came & said they thought it was not fair for some to benefit & others not. It is her that we can bring our own redeemed today in. Then S.P. asked me to talk & we had tea lunch. It turned out quite friendly, & I think he understands the game. He will take the boys for classes in Evangelism. He is a helpless boy really. Then we talked of Charles. This afternoon the boys finished their dance & are staying up till midnight to look to Christ Blake all a nation to college. They want to go to look to Waddy about it & she is quite willing. Then I came & talked of the station atmosphere & opened up a good bid. I have talked too much. But anyway S.P. is happy. Have finished Elliott's order

"Vi-Lactogen" does not need the addition of Emulsion or Lactose.

APPOINTMENTS

NOVEMBER, 1948

ERORO.

Professional

Private

TUESDAY, NOV. 16th

St Margaret's day; & the Hospital day. Was at 7, & it was pouring in front. F P tried to speak in the body of the ch. & would not be heard. Told him all the boys, but he is for crickhacking & withdrawing & putting the oars on them. He may be right. I have not told them, waiting for them to ask & they don't though they were expecting me to speak when I saw them too wet for procession but a service in W. at 10.15 which was rather nice. Next Evening then too. Have joined a long & job not the ones I planned, but useful ones. Asked F P. over to hear Del III of Fano. He was in good & he quite pleased to come. I sorted out old letters. Looked up the dancing practice at 9 (too wet for the real dance), Banffshire & finished my job at 10.30. It was a refreshment to read old letters.

WED., NOV. 17th

Slept in today. Fine & hot. Slack day & have sorted out & got odd jobs done. Did some dispensing & wrote the Lab. report & some letters. Saw Charles & told him F's verdict.

At 3 ~~the~~ we went to see the dancing but it did not begin till nearly 4. Very good technically & as an entertainment. The bines were excellent - a man & wife who go fishing & the man gets grabbed by a hittle (Newton who had hid in the shelter all day. Friends came to the rescue (Kipling was the chief one) & the dancers proper do their part beside it. The 3rd bini like a fat bushwhacker & an Army pullover for trousers was the cream of it. Dinner quite jolly. Have written letters. No M-K yet.

NOVEMBER, 1948

APPOINTMENTS

THURS., NOV. 18th

Professional

Private

Was out to sheep. 31 for Kas. Did a round & all satisfactory. Ang's (H. 21st July 64) did faster & another big one. I'll have lots of them. There a great many coming out. M.K. arrived late this AM. He's the little one. Picking to remain. The latter is pleased. I don't quite trust Mr. H. The M.K. lost a man, David, at the wind in Lac - knocked unconscious & fell overboard. They could not recover him. Wainie came on the M.K. & gave me a most brotherly greeting, & Ang's actually led me by the hand to four little boys who came in a horrible mess. It was good to see them again. After dinner to the boat to see James. One of the crew & I resolved for a walk to battery. Left a battery to be charged got Dewade mail - abt. 4 pm. saw Fr. Kennedy & one from Borneo, a friend. It was lovely on the water in the moonlight. 4 boys came in. Charles. He wandered off by himself on the M.K. & I wondered if he wanted to show away. The little one was very much surprised.

FRIDAY, NOV. 19th

Was to have gone to Lona today. back tomorrow but the boat delayed & after some thought decided to go for the week end. Very hot & humid & did not accomplish much. Job in Hosp. Left after lunch & collected things for South. He went here for lunch & dinner. Mr. H. brought a & a little paper snake & scared the mission girls. They soon got over it when they knew it was a toy but Barbara's face had a look of abject terror. At least she brushed it. Some of the boys helped themselves to the sweets in the store, & are in disgrace. Jean handles them so well.

Packing all the evening

APPOINTMENTS

NOVEMBER, 1948

ERORO GONA.

Professional

Private

SAT., NOV. 20th

Up at 6. Mr. H. & Mr. Pickering went off at 6 in the jeep, & Mr. H. came back for me at 7.30. Off we went plus patient bedding & David at 8, quite pleasant trip. Mr. P. in amiable chap, he took some soap of us on board. The crew came to me with a few letters & several letters. Killebrew at midday & they began unloading the first one. In David, Helen & Eric came aboard. Eric is an older man than I thought, & from old account an old maid. They had had no food so appreciated our Kingfish. Eric staying aboard for the weekend. We reached Kila at 2, then moved our ship on the dinghies & walked & rowed & walked by turns to Loma. Lovely country, was scared for the villages (wh. are plentiful) people are healthy, many children, but the 6-12 yr olds are painfully stunted. They went to Ambasi during the war & fled in rage. Loma pretty place Mrs. C. looks off colour. Gola welcomed. Put up beds, bathed, dinner & bath. David's mind busy as usual. Bed at 9. Helen & I sharing a room.

SUNDAY, NOV. 21st

Woke at 7. only early, H. & I were late. F.C. preaches simply & in an interpreted. Service short, in mine, Kirander & English. After breakfast saw Mrs. C. & talked to her about her troubles. Saw several people quite sick, all interesting. In David didn't get away till 2.30 in his bag. F.C. & George took us to an old Gola plus bomb. holes. Gola snap of the skin cross. A great deal of talk. Bath & evening. Some talk in the evening & to bed early. Loma is a lovely spot, risen again from the dead & in evidence of its previous death. They have built a new Hospital - roof & part of floor abt. 25 x 60 feet long. I think F. Benson must be greatly loved.

NOVEMBER, 1948

APPOINTMENTS

MONDAY, NOV. 22nd

GONA-ERORO. Professional

Private - SEFOA.

Slept badly, woke feeling lousy, vomited Mr. Church. nor to feel but had a talk to Fr. C. & saw old Gona Hosp 2 to 3. George & MacDonald. George a 5 min. talk. A lot of Gona bag going to hospital. I heard waiting for the first time as they set off. Left at 10. Arrived at 4 to 3. Eric Roberts on board. We didn't pick up till 4:30, had no time to see to my Gona pt. Other new pt. too. In evening tried to top of Tenbu 5 success. Can't find. I did not test except by sight for shifting fluid for had been before. T.B. spirit. His mind was quite wonderful. Reduced a dealer. Had shoulder then punched. The others went on board, leaving about 11, but I did not get there till after 1. Still feeling rotten & period. Gona really well. & for the first time I felt as if I was coming home, & saying to go. No mail. The boys give me the note asking ("Kasega") "Burgess".

TUESDAY, NOV. 23rd

Sailed 4:30 A.M. I felt too lousy to do anything but lie still. Had some shots. (not intense) also. Could not eat. The boys sang Matins on board. It was good to hear it. Got to before at about 2, & went on to Lufi to see Mrs. Ball, Mrs. Craswell's mother. Magnificently George took us in the M.K. & we only had to walk back. She is much better but is pretty sure it is malaria. Also threatening ulcers on her leg. Mr. Smith has been quite good. Her. Had a welcome cuppa. I was feeling better. Saw the Hosp. Mr. S. has good plans. & I think does good work & treat his pt. well. But R. had been asking for drugs which Lufi supplied for us. Did not glancing till nearly 6, across 2 ponds in canoes & pretty walk back reached before at 7. Day tried Dinner bath & bed.

APPOINTMENTS

NOVEMBER, 1948

SEFOA - POSAPOSA

Professional

Private

WED., NOV. 24th

Woke at 4 to 7, much better. Affairs in U. wanted medical information then we set off for the boat. Resaid S. came 2 way in. Mr. Smith waiting for us & his canoe; M-K came round after 8 & de-sched. Good trip but time well than previously. Got nothing done, arrived Wangila at 12. Helen glad to get back but these 2 will be lonely together, each at a corner mentally. Saw all the school children, some before & some after lunch; a few adults. Children are thin but not badly. 10 different in appearance, some almost Oriental. Got 5 birds, suppose a Kangaroo from feeling unwell. Evening at 5, & got gaggles when the teacher stopped in the Western lesson to scold the kids in Latin. More kids all 6, then too tired & cancelled for dinner. Later saw Mr S's Philip who seems well - was a ? T.B. - ? raised an abdomen wall abscess. To bed at 7:30

THURS., NOV. 25th

Woke unwillingly at 4 to 7, saw Rachel & turned her back - thank God it went easily. Saw a girl in the village & no signs but goes washing in 42 & exagg. tendon picks. That fever, st. caught & lost the use of her limbs. Walks ~~not~~ now but weakly. ? Pneumonia ? T.B. but chest clear. B' fast, off. Feel well thank goodness. Haven't achieved much but worked. N/C. Anchored here at about 2, loaded mangrove. Ray Nichols came on board & he & I have talked ever since. No dinner, & a spot of writing. A place of calm sea & mangrove island - could be the delta of a river. Early bed.

NOVEMBER, 1948

MUKAWA -

APPOINTMENTS

FRIDAY, NOV. 26th MENAPI - DOGORA Professional

Private

Reached Mukawa at 8, had b'fast, saw F. M. & the dispensary & a few
 pk. The Hatters seem happy there & look well. The M. family & good
 & the babe is plump & well. Away at 10:15, reached Menapi at 12:45.
 Eric got a great welcome. Edith C. at Dogora & infected bites &
 F. Canthrell alone. A big attractive & impractical man. He had
 Randolph in to cook. I saw pk all the after in a pack of kells,
 wh I put in plaster & I had plaster it is. Evening, bath & dinner.
 In Amos had after tea in us, & seems to be a sunny man. I tried to
 look his eye but wasn't any help. Bed at 9:30 in a ramshackle
 landing place, not a real room. Eric busy packing & embracing
 all his children. He is fond of them & they of him. Norman
 wandered into the bathroom while I was cleaning my teeth,
 blissfully unconscious of my presence except as a recipient
 of conversation. Menapi is extremely pretty, but not a
 happy place. No spontaneity.

SAT., NOV. 27th

up at 6 to 6, 1 to Mass. Only 6 there, but of course it was
 Saturday. Eric going for his life, & off at 8. F. B. really is
 helpless. Picked up Mr. Lator at Bamaia, & his police boy.
 He is nice & has constructive ideas. Picked up nothing at
 some out station, & reached Dogora at 3:45. F. Dodge to meet us,
 & lot of College boys. Everyone greeting everyone. up here found
 2 sparks looking for war graves, one talks & the other
 looking one quite silent, from Rhode I. The Kona Falls came
 in & a miss. Mr. Lockman, her native Georgian & the skipper.
 Mr. Lator here, so we had a crowd for dinner. Had to get in
 touch & I finally radio at 5, Mrs. Ball is a beaut. tropical place.
 The first time I had spoken on radio. Am getting quite fond
 of Eric, who is her till Tuesday. Evening at 8, then tried to reduce
 the supranormal fragrance. I fear it isn't much good and is
 a fortnight old. Bed after 10. Saw Pat's house & their sick
 mother.

APPOINTMENTS

DOGORA - TAUPOTA.

Professional

Private

SUNDAY, NOV. 28th

Proclamation Day, S.A.

Woke at 6 AM in English. Cuffa talked to Miss MacLellan who seems to be something in the Govt. Education & who has some constructive ideas about the Papuans. She is meeting many who think everything down-down is desirable. B' fact at 9, washed my head & wrote letters most of the day. Edith's leg improving. Eric talks to her & tries to make her see that obedience comes before her own desires. He is a thoroughly nice chap. - 'I thought at first he was only a fussy old maid'. Lucy the mother of home better & winding. The Sparks came to aft tea & the Treasurers of the Rona Falls to dinner. Arthur here all day but went home to bed in a heap - seems to be leading for fever. I missed E's song on his account. Bed at 9.

At the AM. went down to college. T.B. looks well but full of business. I thought he knew of Charles Blake but Arthur thinks not.

MONDAY, NOV. 29th

Hol. obs. as Proclamation Day, S.A.

Up at 4-30 & off to Taupota at 5, in Septimus. A lovely trip, the hills just glorious in the growing light. Wrote letters, had 2 eggs for b' fact. Taupota at 8-30, after various calls en route. To J. & Miss S. glad to see me. Told a bad & disagreeable & a grossly defined diet - hope it will be right. Bought 2 pk. back to me. Saw T.B.'s new house, but it is too poky, otherwise nice. A Cuffa, off at 11-30. Picked up Septimus, a sick mid at Taupota tonight. Back at 3-30 aft. tea, bath & on the radio at 5. Mrs. Bell better but her leg very bad. She may fly here. Ann worried about her. Sent down me to see Arthur who is a drinker & malaria, to College to arrange for him to be off duty. To O. I showed me Blake's letter which is a heart-breaking one. Those four kids are innocent, at any rate, of anything. The evidence was against them but I, we have let them down. Worst trouble at College. Allan is sacked. Back late for dinner, then examined new mid under G.A. - not as bad as it appeared. Thank God. A school work - too tired to be explanatory or sensible about it.

NOVEMBER, 1948

APPOINTMENTS

TUESDAY, NOV. 30th DOGURA

Professional

Private

St. Andrew's Day Mass at 6 in English, a cuppa, then to see the M.K. off - live on board. Tried to take the dog Bill on a lead but he fought it. Pat eventually got him on board. After breakfast Pat & I declared a sort of holiday & talked policy for some time - but discussion is too difficult. Saw some p.b. ones on SBE, I think, a kid of 15. After lunch, a rest, then to see Arthur who's better. Two boys came down the steep hill to help me. Another lent me his stick. Will kids aft tea, bath, then to T. P. Still thinking over a plan. Heard the M.K. go from East Cafe. Evening, dinner. Tried to read up dislocated hips in bed, but too sleepy.

WED., DEC. 1st

DECEMBER, 1948

Slept in till 6.30. Cuppa, then College, sent to say Emma was 1 lb. Read high & pains strong, so brought her up here. B' fast. Examined Emma - 1 1/2 F at 10, but delivered at 11.15. Went down to Wamira at 1/4 to 12 - a pleasant walk alone. Basil insisted on a bath which was too good; lunch, then saw kids. Basil will not stick to the point. The kids are mostly scrappy, esp. new. Some are pining on roots & any old thing, while others have enough food; they don't share. Even those on good food are scrappy. Basil called at 3.30. Back after 4. On the air at 5. T. P. in touch. Dr. Way, as I promised them down to me or otherwise as looking after her, they cheer Dr. Way. It is a relief but thank Heaven she was improving. After dinner tested Luth's blood w/ Basil's (her father) - it is compatible. T. Georgina's dressing after she came from Louisa. I was then back Luthy.

APPOINTMENTS

DOGORA

Professional

Private

THURS., DEC. 2nd

up at 6-30. Saw pt. o. Shunk Michael, 5 BE. To Danbura. Kathy's chest improving. Real to see the baby chime in when. College babies much better specimens than W. dan ones - perhaps partly due to inheritance. Looked at stools from Wamira & found ova & shaped them properly. Sept 11. After lunch went to F. Gill & Jan as the Wabamir was out. aft. tea, to College. Wamsang met. Another there. for E. Lang & dinner then to bed. F. O. & I talked disipline & re-offenses. He presented the whole thing in constructive way & gave me some useful hints. George Nickson & Arnold brought me home. They know me star lost! F. O. says that some are pledging themselves to stamp out prohibition in their villages. George at Goba has done the same off his own bat. Wabamir was here for supper. Talked to Miss West was has visited everywhere & seems to be a rather fine person.

FRIDAY, DEC. 3rd

Woke at 6, to Danbura & saw pt. When we were ready to take the blood Basil the crow had disappeared. Looked up sundry procedures & did odd job. After lunch to Danbura & saw some kiddies, & then got a message that Basil had appeared. Took his blood - some difficulty - we forgot to remove a glass tube. Got abt. 10 a.m. I had my doubts for some unknown reason. We got the 1st specimen going to slowly at 6, - at 9 when it was nearly done the tube had a violent rigor & a rotten pulse & I don't know why, unless the Sodi Cit was wrongly weighed. The blood sedimented more than usual. The Lorna Tall came at lunch - time for Miss West. we had pictures at night better than previous one & more suited to the native folk. They were surprised to see a City street - house & crowds of people. After fixing Ruth I took both White & sent Kathy's specimen, & went to give them to Miss West. Very good by. She is so nice. She took a film to the developed at Quetta for me. Sister still up well after 11 when I came to bed.

DECEMBER, 1948

APPOINTMENTS

SAT., DEC. 4th

DOGURA.

Professional

Private

up at 7, to Betty after to fast. Temp 103° at night, chest almost clear. Tried to reduce Septimus' R high under G.P. & improved the position but it is easily returns to its highest position since he took it as bad as ever. Basil spent the after making a 5 mile "poker" for him. Little Aidan's shot clear. Lot of interest in the microscope for all present. Aidan's temp also normal & more clear. After lunch slept. Prepared some hygiene & H-W lecture. But went to college for dinner & I kept on my things. Emma 102°, I am worried. No tenderness with menting though she is fair in her uterus & lochia abundant. Breast engorged. Evening at 7:30, to bed. Also started that long promised letter to Miss Young before dinner.

SUNDAY, DEC. 5th

Woke at 5:30. Lr. had a note from Tansford - a ^{Kapal} Her fell & killed a child & injured the father. F.B. sent the St. George's Dr. & Humphrey & Septimus. But had a rest I hope. The St. G. got away at 9 after all. I went to Wedan Mass at 7, after to fast to Dunbrin & arranging for Betty's father's sister to come. Leahy here as T.B. Had a night sweat. College sent the girl back in down to Gorman, but she is slightly red up ^{at Wedan} after lunch increased an abscess in the groin. After lunch I had to suture a boy but at cricket. Then Peter Lalor at in some bad morose cases. Went to mother, bath, evening. St. G. arrived at 6. The man has subluxation of 5-1 jt. & Eric Wood came & a history of like internal haem. After dinner examined him, can find nothing but palpable low B.P. To go seeing to F.B. & to bed.

APPOINTMENTS

DECEMBER, 1948

DOGURA.

Professional

Private

MONDAY, DEC. 6th

up at 6:30. Fixed Septimus' leg in extension, & Stephen in a binder.
 Gave the boys a lecture on R. H. W. after lunch. They seem interested.
 Can't find much wrong in Eric, but not well. F. B. suggested q. they
 Edward to postpone his trip until he could get in touch with Sarsani at
 H.K. - a possible beta trip. He sent me the post to go to Edward
 who is waiting. F. B. is helpful in many ways. The new ward
 is going ahead - looks nice. I could wish for more work to be done

TUESDAY, DEC. 7th

Mass at 6. F. Wallace celebrating. Had a conviction of difficulty ahead
 of strength to meet them a busy day, but not a difficult. College sent
 for me, Charrisa - born at home, she & Laban had a child - blackwater. However,
 we had only a lb (with dead baby) & she was well possibly a false alarm,
 possibly a papilloma. After lunch a cerebral malaria in spasm, a child
 of 2 or 3. Dramatic recovery; Lucius. Humphrey got with the vein I had first
 put in a spasm the needle came out. Sent to Charrisa at 4, nurse clean.
 I wanted to P.V. her to exclude pregnancy, but Laban told me - the greatest
 frankness that he had not slept with her for months. I'm feels privileged to
 be told things like that.

DECEMBER, 1948

APPOINTMENTS

WED., DEC. 8th

DOGURA.

Professional

Private

Up by 6:30. One went on the St. I. slg. Saw Bath who is much better, saw f.b. opened an abscess in nose. After lunch looked the boys (2 alone, a few medical boys who brought in the abscess) on again. Took out some teeth & started a letter to Alan & Co. Pictures after dinner; a good one of the history.

THURS., DEC. 9th

Mace at 6 in English. Saw f.b. till 8:30. Lefthand's extension not so big as before. During schoolchildren all day. The 6-9 year olds would break your heart esp. the Welsh children - teeth awful, painfully thin & stained, knock-kneed, bad posture. Some are probably worm infected. The older children are better. Ambrose is the first surely teacher I have met - he just fell short of being rude. Bath & to the College, a very refreshing place. Another cuppa. Evening, took some snapshots, saw some f.b. dinner & a long talk to F. B. Then back to supper & they both walked back & me in the glorious star & moonlight. This place does grab you. F.O. sent Blake's letter to A.G.

APPOINTMENTS

DECEMBER, 1948

DOGURA

Professional

Private

FRIDAY, DEC. 10th

Up at 6-30, supper & Hospital till 6:15, after. Finished looking at the school before lunch. The older children in much better trim. There are boys from all over the Diocese, though I fancy the teaching in the school does not justify it. Thank goodness there is a Marty's school in the north. At lunch time the St. George returned, a mail for Logans folk, but only a few 12 over for me, one from F. Thompson. He has moved over from Tanapota. Slept till after 3, typed up treatments for the school. At Evening there was an adult baptism, a very solemn and beautiful service - John of the Matarami. The Queen held his hand & led him back to the body of the church for the end of the service. For dinner the 3 of St. M. entertained us on the lawn by moonlight - Miss Beckwith & Pat & me. I was & was. Afterwards we sang Carols etc. Then to bed & finished a letter to Alan Cooks.

SAT., DEC. 11th

To mass. Saw Pk before 6:15, after. Wanted to do Baptism's extension again, but wanted a boat of his for his foot & asked Paul for it. Wanted in vain for it, as I thought he could chop it out in 5 minutes. He finally brought it at bed time beautifully made & soldered like a South Island. F. Bodger elected to talk for about an hour at morning tea, quite a useful talk, but he would not accept my criticism of the kids' health. I will give him a report & analysis. To the College to see the measles kid - I think the rash an allergic one. To call the College people home from Hosp. 18 of them are going north in the MK with Nancy & me. M. is to relieve Jan; she will be more suitable for Logans than Peggy. Lectured the boys after lunch & shaved them gratis. They all very keen. Evening at 7-30. Baptism was drawing & gave me a sample.

DECEMBER, 1948

APPOINTMENTS

SUNDAY, DEC. 12th DOGURA

Professional

Private

Disturbed at 2:30 when Gifford called Pat - man - fever & could not go off again for some time. To 7 o'clock Eustace, & lovely ladies. F. Wallace celebrating. After breakfast and Septimus' leg in the boot, went to Ombura as buses had had break her knee, & Stanley has a boil on his. Betty much improved. Lunch at 12 Pat went to College for her. Wrote letters, washed my head &c. Found a head infected haemorrhage of the scalp which we opened tonight. I think I have offered Septimus (pl) over the drawing he gave me as I said I would send it to my sister & must find it right tomorrow if I can. With a chunky cherry dinner; the atmosphere is certainly much better than I was before. Septimus (medical) teaching me more. Wednesday he also offered to stay on duty tonight to do the head - after a full 12 hrs on duty; but I sent him off. One says he feels better.

MONDAY, DEC. 13th

ref at 2 to 6. Did a skin graft on Samuel's old ulcer - splinted him. Fixed Septimus' extension again - it is a perfect head machine & he has it. He has had teeth from frightened children. Little Keila had a rotten infected out; 4 teeth. Pat had a fairly thin flying gold. The kid was marvellous. A note from Gilly at lunch. I went down after to John, w. of Ronald, leaving P.V. quite cozy. Brought her up; she started at 6 P.M. Both to college at 4:30 & talked to the final year boys who appeared interested. Talked on Hygiene. Evening in English. I have the services there. A new dinner & talked to her to 6 P.M. F.O. busy & I was Confessions &c. I asked him if he thought I should have a leaf; he said no - of the interminable - & found that I must abstain from the privileges as well as responsibilities of station life. Will man. George Miller & Oliver brought me home. George is a most attractive man, & F.O. says a lovely one. I tried to put things right in Septimus' about the drawing. But don't think I have

APPOINTMENTS

DECEMBER, 1948

DOGORA

Professional

Private

TUESDAY, DEC. 14th
Birth King George VI, 1895.

Mass at 6 Wedan, Fa. Wallace. Expecting Betty Rose at 6:30 but she was brought at 8 for repair of hardship. Saw for 1st to fast. Did the hardship & Sephime scrubbed. He was nervous, I think. I hope I did a better job than Dr. W. Did not touch the palate. Seph. is a good learner & will do well. Did stools, & after morning tea did teeth. The four kids are so scared. Treated the boys of Lianis, more stools. Found 2 H-W stools in G. Shaved 2 College boys the eggs as well as used boys. Bath late & tried. Evening. Tonight have been copying Wedan words but not taking them in.

WED., DEC. 15th

Dad's & Mother's 6th wedding anniv. Mass with S.I. for them. Looked at stools before & after to fast. Walked to Wamara. Randolph carrying my bag. He is a Menapi boy. Cassie welcomed in & drink & & started on the kids she talks so much that we must ignore her for a head. Lunch was delicious, the most one I have ever tasted. Kids left at 4:30, and gave a supper. The girl brought me home. Kids in better nick than the Wedanans, busy as food. - but very thin & more badly fed ones in the lower classes. The girl took me to Dombina. Betty's min. P.M. temp 99°. I tried; bath. Evening. Dinner but ate a little. To bed & copied Wedan words & read Sephime mending my & write a T.B. but developed my film & got no advice abt. printing my snaps.

DECEMBER, 1948

APPOINTMENTS

THURS., DEC. 16th

DOGORA

Professional

Private

Confable Communion for medical staff all the boys came though Randolph & Herbert were in late. T.B. had a nice prayer for next work. Saw fb. 11:18 & after b. fast 11. Took some snaps of O.P. & the babies. Did faces 11:18 lunch. After talked to the boys on asepsis, bath & to College. I was too pushed tired & ill. prepared to do justice to the letter, but I got the essentials over to the boys. Last time I spoke too quickly. Evening in Chapel is so lovely. Looked outside & all the Lake boys there. They spend 1/2 their time there. T.B. is full of beans & is a theme. A nice dinner. George Nixon was waiting for me as I left & his baggage book. Home home & Arthur before 8, has been typing notes. Spewster made a lovely job of the machine & made a new part for it. - all in 24 hours.

FRIDAY, DEC. 17th

ref. by 6:30. Saw fb & did Wexham school - 5 all + ve - 11:18 b. fast. To Wexham via Wexham in search of James, she was at Dogora all the time. Saw the policeman & got him to show us the small house & lectured him on seeing that the people used it. Wexham saw Rosemary & had a think of shoulder & T. 100. She growled & swore: she didn't want to go to Hosp. & finally gave in to tears. Bassi's voice did everything from out-reaching hub pleading & a surprising tenderness. All I could do was offer a sweet prayer but it had its effect. Saw the upper school lunch & T.B. came for me at 2:30. MK appeared before 3. I bathed & was down to meet Nancy, ^{1st Andrew} & good to see them. M. looks well. Left tea, saw R. many & took M. to Darbin. Evening dinner quite festive. I wrote & packed 11. Pat showed M. the Hospital.

I'm happy stay at Dogora, much happier atmosphere. I was dreading it rather.

APPOINTMENTS

DECEMBER, 1948

DOGURA-MENAPI.

Professional

Private

SAT., DEC. 18th

mass at 6 English & all the white staff present. 5.1 Embury Day.
 Finished packing, saw P.B. at Hoof. to fast. Said good bye to the med.
 bay & others. Japhet scrubbed up & shook hands with the above,
 bless him. Japhet gave me a cool farewell, I think. I left him
 all last. I meant it is a sign of affection! All the college at the boat &
 18 on board & families; also goat, kid, kittens & camp + +. Fr. Olive say
 Olive. It is a Rhodes scholar & is thrilled! to see I. He is sending a
 radio for me. Good bye to Pat. a good tip. Mathias a board table by a
 college boy in English. George found a few letters for me, one from home dated
 12.2.48. Shaved Nance Brainer, to Menapi for lunch. Nance as usual
 as ever. Saw the station children & young Basil Mathias doing good work
 after Evening Mass. Went for a walk through coconut plantations. U. told
 me of H of E problems. Things still bad but a real friendship among
 the girls. Mr. Lator arrived at dinner-time, with ship. Fr. C. found the
 mink plant for me, a sample name - Cassia Isata. U. & I
 sleeping in board.

SUNDAY, DEC. 19th

up at 6 o'clock by 6.45. The Church was full in spite of Fr. C's
 proclamation, but the College boys made up a number. Fr. A
 assisted. Saw John Hunt again - no fit since last time. B' fast,
 a good person, who wants to be a med. bay. He took us to the college
 to see a sick man but he was absent. Met Mr. Lator who came back
 to the house & stayed the day. Miss Chap. talks well. Meanwhile
 Fr. B. & Fr. A. came over & talked George into sailing in the A.M. I think
 the interference is damn cheek. They would not I think do it to
 a white man. They failed to tell us that we were going to embark
 & we came to the boat for writing things back & George was upset
 about it, & so was I. Wrote report all the after - very hot.
 Bath. Evening a walk & Nance after seeing messengers at the
 Disp. came aboard soon after dinner. The B. house boys came
 to see us off.

DECEMBER, 1948

APPOINTMENTS

MONDAY, DEC. 20th

MENAPI-WANIGELA

Professional

Private

SEFOA

Have been depressed - perhaps - there is no one to share the
 feel of my birthday & nothing to mark it. But I must get used
 to that. Didn't even ask Leo to meet my parents. We started
 embarking the Colley at 4:15. Child - 12 lbs. 5. Rather rough road. (Dop)
 1 A. felt sick. Arrived at 7 for 6' post. bar & a bin, some placed to
 see each other. He is disappointed at going to Tanfoka. Saw the bates, can
 grossly underfeeding me. Am to send her Collins' book. Late
 embarking & got a black look from Leo - actually it was more the
 fault of the others. Fair trip - slept, wrote beneath instructions.
 Reached Wanigila 3.30, aft. tea, saw p.b. r. The girl placed here
 I.A. I think he is from Helen, probably wouldn't admit it.
 Late dinner, some talk & to bed early. Rachel is well, Josephine's Ht
 from 40 to nearly 60. The bates' foot much better.

TUESDAY, DEC. 21st

Mars at 6.30 St. Thomas S.I. for Minnie Turner's husband ordered
 a plane ticket overhead while at Mars. 6' post &
 saw p.b. all Subalabala, but unloading delayed until
 10 AM. Good trip. Had quite a return for messings. Called at
 Tufi; Mrs. Ball was getting up. Breakfast 2. A lovely place
 up here by 3, aft. tea & saw many of the school children & much
 healthier than those in the S. & glad of a bath. Mr. & I went
 out in the glorious, peaceful sunset. Dinner. Schuyler much
 better & less hobbled than previously. F. N. still saying the
 people are more-operative. The no. opening X was parcels;
 ABM & land sent up some rather pink - velvet cushion
 cases & a light woollen frock. Bessie between apples &
 lears. Bed early.

APPOINTMENTS

DECEMBER, 1948

SEFOA - ERORO.

Professional

Private

WED., DEC. 22nd

up at 5-30 to see children who were not there, so to Mass. By that time Lambert had a few kids. Also in 1 Adrian the deaf boy who wants to come here. Buffa & caught the boat. Good trip, huffed all the way. Arrived One Bay 3-30 & the girl arrived at almost the same time. Name had met Jan. The P. boy was loading till 7-ish but he seems to work a lot of time. We had a supper & sorted the mail - loads of it waiting for me via Hig & a big sack full of parcels & papers by the boat. We dabbled till 7-30, mostly. I was busy with the lamp which Mr H. had filled & petrol instead of kerosene. Jan told me of the Sofia trip. Old Alastair & a baby died in her absence, but the trip probably saved the Sofia station. A wood house died anyway, I think. but I don't know if it was wrong to leave the boys alone. They have been & undisciplined since. I think the decision was right. I opened the parcel from home & a few letters - been

THURS., DEC. 23rd

up for Mass. After I paid in 3 did a round, only about 20 ft in. The Swade folk & all the College went on the boat. A great influx of people here for it was. The Waddy had her school break up & I had to give out the prizes - a new roll for me. It was 5 mile under the big tree & Carol singing. But the children so short. Read letters & sorted parcels & parcels till 4, when T.P. took me down to collect the Govt drugs & prompt & 3 bus of them! No invoices yet. After all had had collected them for us. More mail after dinner. A plane flew over in the morning & Miss Green aboard en route to Finsch. I opened a card from her in the after that would explain why it circled.

DECEMBER, 1948

APPOINTMENTS

FRIDAY, DEC. 24th ERORO.

Professional

Private

Slept on but no mass anyway. Fr. had a "relaxed throat"
 Went through hair, after b' fast and Laura's foot. The house came
 easily - clean C.T. underneath. Made up stock machines till
 nearly lunch. Reading more mail after Mr. Pickering here a
 nice chap. The girls decorated our houses & nicely & black
 & eggs. The med boys the Hosp & the teachers the church which
 looks lovely. - & a little stable. Dinner at 5:00 of midnight
 mass. Mame. I helped Jean & the med boys' & was boys -
 Jean & they had some some of the pt in the after. I helped
 Mame say I hadn't been in the after. show but quite forgot it
 got her. Evening & late 7:30-ish. Fr. was busy in the store
 at 8:00 I began to feel like Xmas. Then a cuff & M. I went to bed.
 The others stayed up for mass & to entertain the boys, though Jean for
 me didn't want to. Carol singing everywhere at 11:30. Mame
 was quite late.

SAT., DEC. 25th

Christmas Day.

Mass at 8:00, & large. Parents at the b' fast table,
 a book for me from Jean & Mable. Hosp. job. Got a little
 personal stuff done, & Xmas tree after Ch in Hosp & Mable
 had one outside house. Small boy climbing those slender branches
 & he just poked in the ground. In the afternoon masses of
 people came. All the whites for lunch & dinner. The Mexican
 boy, Rod & N.C. boys & Hattie. A Santa boy & some four
 people all around. Evening on the deck & deck rather im-
 pressive. Dinner late.

DECEMBER, 1948

Professional

Private

SUNDAY, DEC. 26th

Mass at 7-30 incl. Job all day going all the time
but accomplishing little. Went to Southern station.
Went to Base B & 4 draw. Skilled over so often I get
discouraged abt driving after dinner (as to be usual)
Have banded over the business part of things & we banded
till after M.N.

MONDAY, DEC. 27th

Public Holiday obs. as Boxing Day.

A busy hot busy day. To Mass wh. was late,
did not arrive. Gave accomplishments so much effort - helped
everywhere when we should have helped her. Did Laura's skin
graft, made up receipts & orders all day. It seemed from her letter
that about an hour in the afternoon Mavis worried over her new winter
coat all the things packed all 6 for the M.K. it arrived about then.
Lancel brought David & Peggy at 6¹⁰¹⁰ ^{from the bank} my shift for the box for
the Bishop back. Lancel too late then wrote letters mostly.
Only a scrap to Mother & had mislaid the old letter. M-K
brought more mail mainly but couldn't read it - but read story
for Hannah's in bed at 1 P.M. Left for the boat at 11 & it
rained. We all got soaked, inc. poor Laura. Had burial for
the amputee & got better. B. records aboard. Charles & Blake went
too. Mr. Pacherng helpful.

DECEMBER, 1948

APPOINTMENTS

TUESDAY, DEC. 28th

Professional

Private

31-12-48.
Busy day, Marie's fruit on her own: she found it
heavy going. A spot of surgery. I forgot what it
takes so long to get so little done. In the evening got
my papers & office into some sort of order. D.O. for after
tea, arranging for my trip on Friday.

WED., DEC. 29th

No mass. In P. went off to bargain in the market for Xmas
biscuits. He is more silent than ever - thoroughly
unhealthy mentally I should say. Amputated Henry's
finger. Marie the child in sh. after: M. sub. loved it
looked at night - too wet to take my lamp over to
reference, so had a rest & read papers

APPOINTMENTS

ERLO-HIGATURO

Professional

Private

THURS., DEC. 30th

up at 7, had some job tied up. No transfusion done yet. Did a round in M. then letters from Mrs. Jones. The D.O. by jeep wanted at the Hosp. - strong anemia & retained Pl. Left at 11:30. Nurses pushed that jeep - but drove well. Got here at 3, Mrs. A gave me a cuffa, then to Hosp. The anemia had righted itself, still present but not strong & B.O. & no vomiting. A medical boy the woman is sick for 60 hours old, 3rd baby all R.P. Shockingly anemic too. Didn't get her to anasth till after 6: it was an awful job. She almost died just as I got it out - not completed in 15 mins. However she pushed up a 1st saline, Pl. Coramine. To D.O.'s house at 8, covered in blood - she had a fair amount - both anemia of fresh fall! - back at 10 & tied up a 1st fusion. Mrs. Jones gave his blood, that fell! Did not finish till 1:30. Mr. J. is good & as a Coramine but methods pretty rotten. Kipling in, attending in his friend the rain! dark. I knew God's presence & will in me. He pushed her round.

FRIDAY, DEC. 31st

up at 6:30, & fast at 7:30 & to Hosp. I tried. Well, much better! Blood ran in & no trouble. Back to better. Back & work to mother - at last. Left after lunch till 4 & 6 & could hardly wake them. To Hosp again to see stools & the loss from M. Bath, got in evening dress & to party at Mr. W. came at 7. Tall thin bloke & small woman & nice manner. Lint. The D.O. likes him. Mr. Thomas the a man who takes his job seriously. Drank beer & then dinner fried rice & pork & dish & lobster - both good. About 27 there inc. 4 school kids. Couldn't stay awake & the D.O. brought me home. The as are a kind. Geoffrey's son Arthur Hunt has malaria. Anna came in for me. The Hosp. supplied quinine.

JANUARY 1ST 1949
DEBIT HIGATURU. JANUARY CASH ACCOUNT

SATURDAY.

CREDIT

Slept till 7. B' fast in dressing gown - 2 eggs! & fruit left
to eat. P.b. well but Berta bit rigid. Mr. Bremer looks pale.
He is 5' 10" tall & helpful. Spoke started. The D.D. sent the
gift for Mrs. Lane & Marie. Sat. & then hopped round the deba-
daba & talked to people. Was a organized lunch at the office.
It poured & rain, but cleared after. The dancing started at 4:15ish.
Some fine head-dresses. Saw some College boys. To Hesp. again
& reduced the hernia - realized after that I needed it to get
the sac. Mr. A. told me her look. Boy's baby was ill. After
lunch & dinner (Mrs. L. & M. here) I went to Hesp. & asked to see it.
Didn't sleep at Languara after all. Baby O.K. & Mr. T. quite
nothing to me to see it. Poreba (the father) escorted me to H.
was at the mission. Organized a committee for Millegent, who
is losing nothing & there must be plenty there. Mail. Letter
from Sheila Ewen. Bill married near end of November.

JANUARY 2ND.

SUNDAY.

Up at 6:15 & to Languara for Mass the mind. It was a later
long service. Saw College boys there, & met old women who have
horrible cough & bad myopia & photophobia. B' fast then P.b.
dribbled in & I saw them & M. looking on. Saw L. John who
has improved. The climate seems to get him down, chest clear.
Washed my head (at last!) & Mr. P. brought my negatives which
are 5 good. Lunch. wrote to Mother & snaf. At 3 back
to Hesp. M. Mrs. A. gave us a fine tea & the dancing.
Several looks & costumes & dancing best I have seen - esp. the
Q. in the people. Their chief dancer was superb, quite in the
Russian tradition. Everyone there - from Gary Erre, etc. Saw
George & L. Lester of Iowa. Begin to feel among friends. Can't
quite follow John & Jill Law of the Hesp. - they do not come
to H. To the Hesp. & kept up the 2 ops. Berta scared & I think, would
be back out, poor kid. But finally agreed. More dancing, dinner
wasn't so nice & restless. Bed at 9:30 Mr. A. appears not to
trust Mr. Tubbs also - said so only by implication.

JANUARY 3

MONDAY

Woke early at 5. The drums were still beating. Prayers & I read
 learned up at 7. To bed at 8.30. I was told
 for a message from the chief of the. But apparently, well, but I
 am sure I was a mess of it. I didn't get the same whole set &
 nothing but. I did the same seemed to have the same as to content as
 well as an item. Repaired as well as I could. But a blue wash I
 had had a good anaesthetic. Took eggs, but the chances was everyone's.
 A welcome supper & started the candle at 12. Lots of much to
 she had quite a lot, but I glad I did her. Need recent anaesthetics,
 though. Her condition remained good - on for the good. Lunch.
 Lunch. Evening, a 5 min. and, I had to see the electric. Blow
 up K & more up at 11. That than the up I think. Back here
 at 3, dancing was going but had to stop. Again feeling
 now in Mrs. L. & M. here for the tea. Then the As. went to
 Englishes for a party from 5:30 - 7. But a apology for me. Sleep
 in. Lay down, wrote to the B. will feel after dinner. K. took
 me to 11. To bed. 11. O.K. but M. temp 103°. Back to bed. K.
 is in a hating, I hope repentant. I like Mrs. Lane

TUESDAY

HIGATURU - ERORO.

JAN. 4

up at 7, to fast (2 eggs again!) & packed. To bed, felt both
 well. M. temp 100 - 101°. Said a most affable farewell to
 all, brown & white. Ready at 9 but the ship held up. Mr. H. came
 & shore but said no room for me. The D. obviously unwilling
 to press the fl. though he was short of jigs. Means drove me
 down, left at 10:00 to Kipling & Matthews (a fl.) good but passed
 heads of natives homeward bound me. The Sara people arrived at
 11:30, lunch just ready. No news. Peppi's ulcer improved.
 Godwin died yesterday. Tidying & doing odd jobs all the after. All
 6, bath, dinner, tidying the house, Compline all bed.

DEBIT

ERORO.

MARCH CASH ACCOUNT

JAN. 5th 1949. CREDIT

WEDNESDAY

A big day but little to show. To Mathias before to fast - everything but a baby in meals service. Then saw p.p. & did Benjamin's fast dispensary + +, the boy cleaning & trying to make John's fast things where they belong. Worked on all 6 - don't know what I do in the time but it is hard work. Tought Kipling to take pulses. Am worried about old Kae Emba. Bath & fixed my light etc. is now decent. Smaller than Compline. Mine had Kipling's notes, they are quite good. Jan's teaching also. Bed & read a little. Have put * Alex in charge of the store in an evening.

THURSDAY.

JAN. 6th.

Up at 6.45 instead of 6.30 & out at 10.15 - 7.5 P. is a bus. Tried to do a round before 8 fast, but it interfered with b'fast & all confused. B'fast at 9, finished round didn't get to the end till 11.15. & did Joshua's arm. A good kid & cheerful all. saweth. It took 3 hrs - lunch at 3. Elkin scrubbed, good but slow. Linnam was fibre. Linnam & 2 fibres underneath attached to the spine. R has a much muscle left but hope I get all fixed. Little done since besides cleaning up. Did Govt. report.

* Forgot Jake's trouble. A husband accused him of raping his wife - the wife's story. We held an inquiry & Ambrose interpreting. The wife shifted ground under cross-examination. The husband may have hit Jake & threatened. It seems that a man may have attacked her but "not intercourse" as a fact. Not one of our staff. Husband decided he looked a fool & not go to Govt. about it.

FRIDAY.

JAN. 7th.

Up at 7. A much easier day for all. U. got the ambulance going. I did Dispensary wh. begins to look ship shape. K helped. Gave them a talk on Compline. 12-1. It sank in for some of them. Elijah showed in his new house to h. & saw the new dormitory, got ship shape. Boys asking for fellow cases both fast. It is hard to refuse the former, esp as

Dec 17.

my mail
for the day
admitted
him. An
day off.
Hein was
busted a
Fred has a
different
many of
all of them

SATURDAY

Gave
at 6.15 to
on their
finished
beer fire
clayed to
left. For
han la
Edgar was
to mother

SUNDAY

my
after
garden
garden

after lunch had a real sleep. Sewed on 17.2. Day 1 found
mind was in my machine. Got no working done. 2 leather bags
from Dobson want a job as work-bags but we don't need them.
Kept on for obs. in a warty cough. Liable to E. G. I told him to
cook as I know is sick. Discarded 9 small boys & Reg. Her when
no good. is kept in bed.

* Reggie at Baba

to make soap
each bought
of the beer
was on his
app. I think
how can be
much better;
a good. To be
childish in
look to him

AN. 8th. 1949.
him appeared
as them. And
Disfencing
board more
the first
early. Fred to
they came
wing of food.
led to better

JAN. 9th.
agreed on all
whole. Hash
as a parking
which generally

play. found
12 leather bags
I told him to
Very humid today. not hot.

my wife
for the day
admitted
him. And
say off. I
then went
lunched on
Fred's
a different
way of
ab. speak

Payment of medicals on 2/5
Head of Station?
Signature of Mess. ap. when I am on
Head
Purchase of stationery & on 2/5
Mess. ap. a Pers.
Indig. staff pay holiday fare
mess. & arrangement: Daw Head
mess. ce. Staff pay fare?

make soap
and bought
of the Pers.
warrior on his
up. I think
we can be
much better
good. For is
the dish in
book R but

SATURDAY

Gave
at 6:15 for
on their way
finished
less fixed
changed to a
top. From
ban lab
Edgar took
to the other

Simon got 650
Need allowance 250 =
850

Received

N. 8th. 1949.
him appeared
is there. And
afternoon
board more
the fig &
only. fixed to
they came
ing of food.
a better

SUNDAY

my &
afternoon
garden. B
garden!

Pamphlet 2 yrs. Misericordia

AN. 9th.
garden. B
lake. I had
a parking
which generally

after lunch had a very nice day. I found
much work in my machine. Got up writing down 12 letters
from Sabaduna want a job as work - but I don't need them.
Kept on for ob. in a pretty rough. Liable & E. L. I. I had things
cook as I know is sick. Discussed 9 with boys & Reg. Her when
no good. is kept in bed.

* Reggie at Baba

my niece Elkin asked. He is busy getting ready to make sago for the Hap. - arranging it well. He seemed very tired tonight & admitted to being tired last night & was solicited of me by the Hap. And Elijah offered to clean my house tomorrow on his day off. I got them all so shifted in other ways. I think their devotion to the people with causes & a few can be trusted on their own. Peggie is also looking much better. Fred has a wash on his dressings. B.D. Riden is good. F.P. is a different man since Jean went. P.M. same. I dislike in many of his remarks but at least human. He took the boat off speaking slowly to natives.

SATURDAY

JAN. 8th. 1949.

Gave M. the day off up at 6. Elijah & Elkin appeared at 6:15 to clean my house. I said it is well bless them. And on their day off a quiet day in Hap. & got the Desferreary finished. The S. Han gift sent. The hat cupboard more or less fixed. Peg's ulcer improving. Red. Fred fixed the fire & changed to dinner, in good form. I soaked off early. Fixed the Hap. Found the 4 Hap. people missed dinner. They came from late from Erord. Must organize the giving of food. Edna cooked them some sago & coconut. Started a letter to Mother & to bed early.

SUNDAY

JAN. 9th.

My day off. Church started late - 7:30 & dragged on till after 9. Saw the Oqababada who are willing to make a Hap garden. Bless them. Had to give them smoke & paper as a parking gift. Cleared all my shoes. Then cupboard. Had generally after lunch had a nice sleep (?). sewed the M.T. bag. found mud-wasp in my machine. Got up working down 12 leather bags from Sobaduna want a job as work - but I don't need them. Kept on for obs. in a nasty cough. Liable to Egelial. I told him to cook as Ekawwa is sick. Discussed 9 Hap. boys. Peg. Her ulcer is good. is Kept in bed. Very humid today. not hot.

* Peggie at Baba

ERORO.
DEBIT
MONDAY

MAY CASH ACCOUNT

CREDIT
JAN. 10

I tried today, prob. the weather is so humid. I then languished for Bay went soap-making. Did a round after 6 p.m. & did quite a lot of dispensing. A bunch of new pt. from Baniar, mostly jaws & horob. Dispensed till 3:15 then wrote last report & scribbled an end to Mother's letter & sent them to Enoch & John Wm. Evening, bath, & the soap-makers came home a good day's work but more tomorrow. Decided to graft leg & leg. Tonight asked F.S. all Communion for bed pt. & spoke rather impatiently. He will wait till everyone puts everything in his hands before he starts work. apologized after & he opened up a bit. Say he will do some work in the Hosp. Getting Sam & Tivita drugs ready. Have sent for Leila of Kabarada & plan to accept & Tivita bay for training.

TUESDAY

JAN. 11th

Mess but I slept in & then took my Communion & Nellie & Jess in Hosp. Did leg's graft & she was v. good. sang hymns softly when she was afraid of pain. Then did poor old Bartholomew. After lunch the bay brought a head case, rapidly & a gash in scalp. The MK arrived & Wandy's bay also F.W. Waller & F.C. Bernard on holidays & Humphrey. Rained all night Bay's down. Baked. Blanket ball net. 5 Lava pt. arrived just at dark.

WEDNESDAY

JAN 12th

Mess again but I didn't know it was on Sat & had to sleep on in the morning. Don't know how Davis keeps up the pace. Got letter & packages off for F. Lill. Saw new pt. H. & finally got drugs packed for Sangara. Worked till 6, then opened Hosp. parcels. Too tired to work. To bed & read letters. MK sailed & my 3 Sangara bays & thank Heaven F.S.P. has gone to Dewade. I hope for Romney can help him. Took out Fred's tooth. The one I failed in before. Could get the mand. N. my need to go sharp & it was an awful job for both of us. The poor kid fainted. He is Elkin's step-brother & a cousin

ERORO.

DEBIT

THURSDAY

JUNE CASH ACCOUNT

JAN. 13th CREDIT

An easier day for both Maues & me. Not up till 7, wrote to Syd. & Mathias. Deacon R's English is frightfully poor. B. fasted did a round, a long one, & M. & I made speeches lauding fire & family cooking. I hope it is wise. It makes fair use of Hoah's shes impossible. Another lecture at 12, find the use of English a great barrier. They thought geese were identical & maggot! Must strain some films for them. I must learn what Maue achieved my first whole sentence today. Peg got malaria, neglecting her business. This afternoon put papers off in order, thank goodness, putting records in order. Shaved the boys same Papuan snafu after compliance. Great interest.

FRIDAY

JAN. 14th

Can I remember Family bust.

SATURDAY

JAN 15th

Day off. Fixed my cupboards & my house is now fairly tidy. Wrote letters for M.K. Coastal mail strip in Hoah. Kipling took the day off instead of doing dressing prod. English really read & shining up even pleasant John Deacon off hand too.

SUNDAY

JAN. 16th

Mathias & I P. away up at 6, did job & fed the family on a cuppa. Mathias less slow than expected. Ambrose said it was the Ogalabusta who start our garden tomorrow (hope) thought it was a fight, but only an amicable discussion of day. In Hoah till lunch & off in sun. Fixed Peg Rod & fixed for dinner - chicken soup &c. And look tomorrow. Elkin is tops - a good lad. My lamp has been bad, fixed it today & promptly broke it tonight when I got a fight & jumped. Talked to Peg abt Myggene lectures for the wharfy.

ERORD

DEBIT

MONDAY

JULY CASH ACCOUNT

JAN 17th

CREDIT

Good morning, bad after. Did a round, all wheels improving. First Anat lecture at 12. Kitchen kept safe: no wood, no washing, no Wellington. We went off in the Bull's Nance & I doing orders: trying to get local food. Boys going to village. MK brought 2 sick ft. a nephritis (I think), malaria, & a malaria crain pleurisy, one of the crew. Round round achieving little. Boys on duty late, I got scolded. Jasper & Co back on MK. Elijah wanted to go for his holiday & took age to see things straight. Finally dinner at 7.15, from came for meal at 8.30 & I had to keep him waiting. Back to the sick people & finally a bath & bed.

TUESDAY

JAN 18th

Judah & his village came to work. Busy day! Tena ft. arrived 10 AM & crowd of relatives. Admitted 6 in addn to those of Monday. I got up at 3 AM to see them & found no medical help & sailed with them later. Also re-installed Eli in a prefect. Lecture & all the boys on holiday came. It pleased at that. *Muddy's graft did not take, alas! but healing.*

WEDNESDAY

JAN 19th

Called at 1 AM to Eli admitted Tues. One of passengers. Useful object lesson to Edgar & Clifford. At night Joes over food. Ambrose & Kae embos got more over their wounds. Looked a bit up job. But they got more truly. Bay had to cool more. Admitted John Mearns & Smith & a T of 101. F.P. not back.

DEBIT

ERORO

FRIDAY

AUGUST CASH ACCOUNT

CREDIT

JAN 21st

Woke up at 6:30 to say Elkin took John away in his. On
 inquiring after found they left early AM. The E. Baker, so they
 are well accomplished. Elkin Benignus to send for Livingston & the
 father then mother came wondering if a fact later he came to
 be - more upset about her losing her medical work than
 the moral side but is anxious they do not mean. Wrote to E
 Elkin to send him back, at L's request. Noel to be in AM
 saw Elkin about it - said all the boys know before is no ending
 I told him as prefect he should have tried to stop it told
 everyone the same old lecture, as I am duty free today
 but little accomplished John's better but still nearly 7 and
 a woman stealing on bars & discharging her

SATURDAY.

On duty quiet day

SUNDAY.

Off duty. Wrote a few letters & Mr Hubble took them
 Lighthouse visit to P. had a Mr Pickering who brought
 us chocolate milk man. Saw Barbara Faith & V. Linné P.M.

MONDAY.

JAN 24th

13 yrs since I went to bed. Did John who is much better.
 Half rounds re. Very muggy day & trying. Name feel it
 but was to say so. Finished unpacking things. Went buying
 food & Elkin to Ruerge, Vataku, & Barbara to see L. Elkin
 saw Juliet who wants to go to Lora. Frank wrote they asked
 to be married & he sent them home but they haven't come.
 Back at 6:30 a lot of food Elkin again. Sept. 1. F.P. came
 at 7:30. Raining as usual Light today as usual. 0 hrs

TUESDAY.

St Paul

was 6:30.

Mr Thomaseth came to pay a plane and take me to
 Moresby. Packed till midnight. Gafhet working others
 up all CRTS money & I had to explain to him John
 Dean & Eliph abt. it had a fact. Trefling & Jasper
 c/o too little food - night boys quite content. Thomas
 putting K up to it.

DEBIT

ERORO - DOBADORA.

SEPTEMBER CASH ACCOUNT

CREDIT

JAN 26.

Left packing Regent's Dept at 9:15 also Bartholomew & Livingstone Bay morning, putting things in order, settled food question. Hope for good. Full of beans after his trip. At 12:30 Mr Thomasethi came - not going today. Plane expected Saturday, so expect we go on Friday. Went for fan from Tana. They came in, despite relative by the sea, but no food. Elia went out again to see him. Relief to have no white pt. - but Reg is a dear. Getting to know Massey better. Ann is tired.

THURS.

JAN 27th.

Last night
Got to sleep 9:10, awakened at 9:30 - Julia. Ezekiel in pouring rain - I all dressed as a bride. I did my talking then, but don't think I made much impression. I P like a perfect idiot and not send Julia home alone. But to sleep in Deacon's house, & in A.M. she ran away. He wasn't even going to notify Juliet. Deacon: Ogo badas, look for her: brought her home from Wansaka, she ran away again. Manual day in Hosp. My lamp not working, work better by kerosene to draw to Komey. To Chit that boy? Sy that in from Mamba way - Komey.

FRIDAY.

JAN 28th.

All teachers in & getting their medical store ready. Gove a good workman & doing his job. A rush to get away at 3, so I called early, but waited while I bathed. Left at 3:10. Stuck in Eroro Ch to be: it is up, but police boys pushed us out. To rest. Home at 5:15, I in R.H., Mr T in a village house & boys. This is good. His boy cooked fried rice & meat & eschschol to eat & ifora drink & Dounde, son of policeman & Barisani school boy, brought coconuts, mat, & talking principles of communism &c. At 8:30. It is well out here alone. Hope Hospital remains quiet. Juliet has gone after Julia, & all to talk a marriage.

PORT MORESBY.

DEBIT

OCTOBER CASH ACCOUNT

CREDIT

SATURDAY

JAN 29.

Good night. I like the rest house up at 1/4 to 6. I spent some time in folding my bed re. 6 fast-fried potatoes, N.G. asparagus, lettuce, powder going to the house - boy. I am sorry to dream. D.O. there told me in confidence that Lerner & Becker are in trouble of all treating natives & ~~that~~ I transferred. D.O. did not come, but plane full of Highchildren & 13 natives. Arrived 9:30. Got truck in late. A spare plane on the dream. F. Palmer, but boy gave me a cuppa. My radio had not come, no one booked but the before nothing up 2 night. F. Palmer to talk. Wrote to mother & Lerner, were talk to bed. Hearing much of Mission boy here, of Lerner trouble, advice re.

SUNDAY

JAN 30.

Wass 7:30. A no of Ambassadors there en route to work for A.P.C. 3 whites & we all received first, with I do not like. There is a feeling of separateness between white & brown. Wrote letters & got ready for interview. Much more writing than F.P. took me for a spin through island native his village & pitifully undernourished children living on bread & lolly water. Lerner, Lerner & a cuppa after for white. Mrs. Dovers there, accepted for 2 yrs for A.B.M. Thyroid but pleasant. All very apt. 7 Gurus.

MONDAY.

JAN 31

6 fast. & on the phone for ages re a plane, supposed to leave at 12. Packed, weighed in at 10, & to see Dr. May. A big friendly man, most cooperative. Hope his chief will endorse all. He thinks Govt. will supply all drugs & baffly for more registration coming in but still doubtful. Thinks Administrator may help & radio. Approved of my action re C.R.T.S.!! Laid med. bag on big disappointment. To dream, little Dragon came in but did not return to back for lunch, wrote to see Marjorie D. He sees forwardly of V.F.M. called to dinner. A very silly amusing picture. Talked at Reby till 12:30 all sort of things - native ser, peaches, our father's & same re. He & I think alike all many things.

DEBIT

NOVEMBER CASH ACCOUNT

CREDIT

DEBIT

DECEMBER CASH ACCOUNT

CREDIT

MEMORANDA

NOTES FOR 1949

Letters to write -

Pendings:

Rev. R. G. Williamson, Raywood
and

Beth 2324 Barnard St.

Mrs Evans

Mrs Howell (for M.V.)

Sheila 14 Waterloo St.

Chisholm

? Miss Stiles 33 Basin

Mr Ribbert 4621 Kingsaver St.

MEMORANDA

NOTES FOR 1949

Melbourne

A B M

Rae

Miss Beard C/O St Peter's Clergy Hall

Leaves

David

Robbie - Mrs George Pearce, 143 Kent St. Richmond

Miss Lennan North Dept Q.U.H.

F. Clarke

Harold

Miss Green

MEMORANDA

NOTES FOR 1949

Tasmania

Maida Williams

MEMORANDA

NOTES FOR 1949

Hayward

Woodward Comrades

1948 Editors Gladys Hayward & Pat Morley

TELEPHONE NUMBERS OF CONSULTANTS, HOSPITALS, NURSING HOMES, NURSES, AMBULANCES, ETC.

Nestlé's—Sydney	17 Foveaux Street.	FA 0488	Nestlé's—Perth	Nestlé House, 188-190 St. George's Terrace. B 6161
„ —Melbourne	591-599 Little Collins Street.	M 2971	„ —Newcastle	Darby & King Streets. B 1417
„ —Adelaide	25-7 Franklin Street.	Central 7050	„ —Hobart	King's Hall, 133 Bathurst Street. Central 3602
„ —Brisbane	Nestlé House, 188 Barry Parade.	B 1711		

Sept 23. Arrived at Ennis.

6 hours fell down Sept 19th

24. Welcome dinner, 17 at the meal

Oct 8. 2 VS Army men looking for VS graves.

9. To Purcell finished his picture for pencils (transferred)

12. To Dewar.

19th. Romney's 40th anniversary

27th. Maddy's mother died.

31. To Langara to examine schools.

Nov. 20. People at Gona had built new Hospital

25. At Wyeala. Version on Rachel.

27. Two VS. men at Dogura looking for VS graves

Miss McLachlan visiting Dogura - Govt. Education

Dec. 17. Names Elliot arrived at Dogura new staff also his.

27th. Jean left for leave. Pkg to B came for leave.

30th. A to King for emergencies.

Medicals
Thompson Gophet.
Jaeger
Elkin
Dillon
Ehigah
Edgar
John W m.
Fogel
Haki.
Chiffard.

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